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Hepatic Therapeutics.

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The treatment of the liver has to be considered from two standpoints, medicinal and hygienic. The medical treatment of the liver is but little understood being confined to the use of a few drugs, the effects of which are irregular owing to our being unable to distinguish the different pathologic conditions. Excluding the surgical diseases of the organ and those of the biliary passages, the pathology of hepatic diseases can be summed up under the heading of cirrhosis, a condition which is always the result of an infection or toxaemia. The hepatic cirrhoses are divided into two classes—those in which the lesions are simply a connective tissue growth, a simple sclerosis, and those in which the sclerotic changes are accompanied by lesions of the hepatic cell. Toxic cirrhosis may be due to an autointoxication or to a heterointoxication, the former being associated with digestive disturbances, gout, diabetes, etc., the latter exemplified by alcohol, lead or phosphorous poisoning; the one associated with the cirrhosis of Laennec and annular cirrhosis, the other associated with hypertrophy, demonstrating the resistance and effort

at compensation of the sick organ. Infectious diseases, as malaria, syphilis, etc., produce cirrhosis, usually affecting the biliary system, Hanot's hypertrophic cirrhosis being typical of this form. There are cirrhoses due to mechanical causes, as those associated with cardiac diseases.

Cirrhoses in which there is simply a growth of connective tissue do not long continue without affecting the liver cells, producing fatty, amyloid, or pigmentary degeneration, causing more or less grave derangement of cell function. During the progress of the disease they cause three modifications of function—exaggeration, diminution, and perversion. As a rule the exaggeration and perversion of function are transitory conditions; they are represented by hypertrophic toxic cirrhosis, the result of the resistance of the organ to the disease, but the overtaxed cells gradually succumb to the hyperfunction entailed and hepatic insufficiency follows; the nature of the perversion or exaggeration controlling the precise form of insufficiency which results. Hepatic insufficiency may exist with out demonstrable cell alteration; more often it is symptomatic of distinct lesions, but it means that the organ is unable to fulfill its normal functions. The functions of the liver my be divided into four groupes:

1. Circulatory. The liver destroys the erythrocytes, playing the part of a regulator to the composition of the blood. It holds iron in reserve, obtaining it from the destroyed cells and from the food.

2. Glycogenic. The liver forms and holds in reserve the glycogen, controlling the carbohydrate nutrition; it also controlls the proteid and fatty metabolic processes.

3. Antitoxic Function. The liver forms urea from ammonia, forms and destroys uric acid, forms the sulphoconjugations of the phenols; it arrests and modifies toxic substances, usually by oxidation, being the organ in which the most exidative processes occur.

4. Biliary function. The liver forms a secretion—the bile, which may be considered both an excretion and secretion, as it contains the bile salts glycocholate and taurocholate of soda, which are necessary for intestinal digestion, while the bilirubin and other substances are excreted into the intestine for elimination.

Of these four groupes of functions it is evident that one or more may be deficient, and to treat any cause it is of importance to decide

which function is insufficient. Physical examination gives little or no help in the differentiation. Antemortem examination of the bile is impossible except in cases of fistula, and it is to the urine and feces that we must look for the data necessary for a diagnosis. The following are the points to be examined to determine the nature of the hepatic insufficiency: alimentary glycosuria, hypoazoturia, ammonuria, hyperazoturia, urobilinuria, indicanuria, intermittent elimination of methylene blue, the oxidation of sulphur, the conjugate sulphates, uroerythrin, and hippuric acid. The feces should be examined for fat, bile pigments, and undigested proteid.

Alimentary glycosuria, first studied by Claude Bernard, followed by Robineau, Roger, Hanot, Gilbert, Reynaud and others, as a pathologic condition, is usually tested by the administration of 200 grammes glucose or cellulose syrup. Should the urine contain sugar, giving Fehling's reaction, the glycogenic function of the liver is affected. The value of this test as evidence of general hepatic insufficiency is disputed. Roger found the test positive only in six out of ten cases of insufficiency, Surmount in ten out of fifteen, Bierens and Haan in eighteen out of twenty-nine, Reynaud and Olmer in eleven out of thirty, Maury in sixteen out of fifty-three cases. In atrophic cirrhoses Valmont found the test positive in one out of seven cases, Mehring in two out of 9, Fredriches in two out of nineteen cases of phosphorous poisoning. These figures show that in hepatic sufficiency the glycogenic function is impaired in about 40 per cent of the cases, and in atrophic cirrhoses in about 16 per cent.

The test for urobilin in the urine is easy and should never be neglected. The filtered urine is heated with a little ammonia and a drop or two of zinc chloride added; if urobilin be present green fluorescent coloration appears. A more complicated test is to saturate the urine with ammonium sulphate and dissolve the precipitate in alcohol; a reddish-brown colored solution is obtained, which can be tested with ammonia and zinc chloride solutions or with the spectroscope. The latter can also be used with the fresh urine, but is too delicate, as small quantities are detected which are not pathologic. The question as to whether urobilin is formed in the intestine or in the liver is still a matter of dispute. Hayem says that urobilin is the pigment of the

diseased liver, and states emphatically that it is never found in the urine except in cases of hepatic insufficiency. Vires considers that clinicially the presence of urobilin in the urine is definite proof of hepatic disease, and that it is of secondary importance where it is formed; he considers urobilin the pathologic and bilirubin the normal excretion of the liver.

Indican is found in small quantities in normal urine; in excess it is associated with hypochlorhydria, sometimes with hyperchlorhydria, with the presence of pus in any part of the body, in Asiatic cholera, cancer, typhus, and constipation; it is probably of intestinal origin, but the liver takes an active part in its formation. It is present in excess in most hepatic diseases, but it is not an absolute sign of hepatic insufficiency; it should be regarded as one of the toxins which produce the disease.

The elimination of methylene blue is a test which is difficult to carry out, at least in private practice; it consists in injecting 0.05 gramme of methylene blue in 1-20 per cent. solution and watching its elimination in the urine. Under normal conditions the coloration of the urine is regular, increasing to a maximum, and then diminishing. In patients suffering from hepatic disease the coloration is irregular, alternating in depth of color. In severe cases the coloration may be intermittent.

Hypoazoturia is the result of the failure of the liver to form urea from the carbonate of ammonia, consequently the proportion of the total nitrogen eliminated as urea is reduced and the ammonia increased. The methods for the quantitative estimation of urea and ammnoia are complicated. Follin's method is best, but tedious for general practice. Under normal conditions the nitrogen eliminated as urea should be about 82 to 95 per cent. of the total nitrogen; in cirrhosis the percentage of urea nitrogen may be reduced to 75 or 79 per cent; in jaundice from 50 to 70 per cent, and in yellow atrophy from 40 to 60 per cent. The urea function of the liver can also be tested by injecting from 5 to 6 grammes of ammonium acetate into the buttocks; the ammonia is converted into urea under normal conditions, but is eliminated as ammonia if the hepatic function is very much impaired. A certain proportion of the sulphur is eliminated not fully oxidized to sulphate; if this proportion is increased it is evidence of imperfect

hepatic function, the liver being the organ in which the most active oxidizing processes of the body are carried out. The proportion of neutral sulphur to total sulphur eliminated under normal conditions is from 10 to 12 per cent; in hepatic insufficiency it may be increased to 40 per cent. This is considered by many to be one of the most important of all tests for diagnosis.

Roger and Garnier introduced a solution of dihrdrogen sulphide into the rectum; under normal conditions the gas is retained by the liver, but in hepatic insufficiency it is eliminated by the lungs, the expired air blackening paper wet with lead acetate solution.

Uroerythrin is the bright pink color so often seen in the brick dust sediments of urine; it occurs in acute diseases of the respiratory system, in acute rheumatism, and in gout. It is probably only in the latter case that it can be considered as evidence of impaired hepatic function.

A diminution of hippuric acid is said to be a symptom of hepatic deficiency, but as only 0.3 to 0.4 gramme of hippuric acid is eliminated normally in the twenty-four hours it cannot be a test of great value. The presence of small quantities of bile pigment in the urine which can be tested for very easily by means of Robin's test, is always most positive proof of a congestion of bile within the liver. The examination of the feces is not as often carried out as it should be; absence of bile or disease of the biliary duct causes the alcoholic stool and also increases the amount of fat. Especially in infancy and childhood is the pale stool of diagnostic import, it being positive evidence of an inefficient liver.

The toxicity of the urine has been demonstrated by Bouchard and his pupils. As the liver is the guardian of the body against intoxication, hypertoxicity of the urine may be considered as a sign of impaired hepatic function, but the methods at our disposal for testing the toxicity of the urine are unreliable.

There is a condition of hyperazoturia in which the elimination of nitrogen by the urine is enormously increased—not those conditions of hypercritical elimination which occasionally occur owing to some retention, but conditions in which the daily average elimination of nitrogen reaches 15 to 20 grammes or even 25 grammes. In these cases the percentage of urea nitrogen may be normal or even above normal.

Cases are on record in which the percentage of urea nitrogen was as high as 98. The neutral sulphur is also diminished to less than 10 per cent of the total sulphur. In these cases there is probably a hypersecretion of bile, but this is difficult to prove. On physical examination the liver is usually large, hard and tense. This condition occurs in gross feeders, the liver being stimulated to over-exertion, necessarily followed by cell fatigue, with consequent hepatic insufficiency and atrophic cirrhosis.

In the treatment of hepatic insufficiency it has to be remembered that any one of the functions may be insufficient, and therefore it is of importance that they should be differentiated by the foregoing tests, which will show the condition of the glycogenic, the biliary, the urogenic, the antitoxic, and the oxidative processes.

There are a certain number of drugs that are used in hepatic disease somewhat empirically, no pharmacodynamic study having been made of their action excepting the cases of natural or artificial biliary fistula.

Opotherapy of the liver has not so far received much attention. Garnot, Gilbert and Danis claim to have had good results from the use of liver extracts in atrophic cirrhosis, they having observed an increase in the biliary, urogenic, glycogenic, and probably also in the antitoxic functions. Spillman and Demange found that the albumin and urobilin disappeared from the urine. Carnot and Gilbert macerated 150 grammes of fresh pulped pig's liver in 250 cubic centimeters of warm water for twenty-four hours, and administered by the rectum with results. Gaillard and Crequy administered 150 grammes of pulped liver by the mouth, which gave good results, the active principle apparently not being destroyed by the gastric juice; but it was too nauseous for most patients. There are preparations of powdered liver on the market, but they often produce stomach trouble.

Robin has studied the action of drugs in the treatment of hypertrophic cirrhosis in its early stages. Opium in small doses diminishes the glandular and digestive secretions, and is indicated in cases in which a hyperactivity of the stomach exists. Belladonna inhibits the functions of the liver, according to Riegal, Pawlow and Haidenhain. Arsenic in small doses has a small sedative effect upon the action of

the liver, especially on the glycogenic function, but its use for any length of time is contraindicated owing to its tendency to produce fatty degeneration. Mercury in small doses is a hepatic sedative; it does not increase the formation of bile, but stimulates Auerbach's plexus. Antipyrin and the bromides are also hepatic sedatives, and are especially indicated when the urea elimination amounts to 0.5 gramme per kilogramme of body weight, They should be administered in about 10-grain doses before meals, with a little sodium bicarbonate to prevent irritation of the stomach, and should be discontinued as soon as the urea elimination has reached normal. Sulphate of copper and lead acetate are also useful in hepatic hyperactivity. Potassium iodide in doses of 5 to 10 grains per diem is valuable, but the doses must be small as the stomach in these cases is susceptible to its disturbing action.

Hepatic stimulants are more numerous and a little better known as benzoate of soda, salicylate of soda, penumus boldus, sodium phosphate, aloes, jaborandi, pedophyllin, and gamboge. Potassium iodide acts indirectly by dilating the blood vessels and increasing the quantity of bile according to some observers. Peumus boldus is given as an infusion; its principal action is diuretic, but it is also used to stimulate the liver. The action of sodium phosphate upon the liver is affirmed by Rutherford, but denied by Prevost and Binet, Baldi, and Stadelman Aloes in small doses is a hypatic stimulant, as is also podophyllin Jaborandi in small doses is said to stimulate the liver as it does all other glands; in doses of 1 to 2 grains of the powdered leaves it acts upon the liver and does not provoke diaphoresis and salivation. Sodium glycocholate mass in doses of 15 grains per diem stimulates the liver cells increasing the flow of bile, thereby removing accumulated waste products, especially bilirubin. In cases with the icteroid coloration of the skin it will clear up the complexion in a few weeks. Especially is it indicated in hepatic colic, many cases are on record where its continued use has prevented the attacks of colic permanently.

The diet in diseases of the liver is of great importance, the guiding principle being to obtain the maximum amount of nutrition with the minimum amount of physiologic work, thereby giving rest to the organ. Proteids are necessary for proper nutrition, but in much smaller quantities than generally taken. Chittender has shown that nitrogen equil-

ibrium can be maintained in health with an intake of about 6.0 grames of nitrogen per day. The products of proteid metabolism urea, ammonia, uric acid, creatinin, etc., are more or less toxic and entail considerable physiologic activity on the part of the liver as well as upon the kidneys in their elimination. Fats are for the most part absorbed by the lymphatics, only a small quantity entering the liver by way of the portal vein; except in the suppression of the biliary secretion the easily digested fats, such as cream, butter, and the vegetable oils, are well borne in moderate quantities. The carbohydrates give but little work to the liver, their end products being principally carbondioxide and water, both of which are easily eliminated.

The diet in hepatic insufficiency and hyperactivity should be moderate in quantity with a minum of proteid, say about six grammes of nitrogen per day, with some little fat administered in the form of cream, fresh butter, or olive oil, and sufficient carbohydrate to bring the total diet to about 10 calories per kilogramme of body weight. The meat should be well cooked, preferably red meat, white meats containing more nuclein; gelatinous dishes, as calves' head and feet, etc., are to be avoided. Boiled fish, avoiding those containing much fat are allowed, but shell fish are debarred. One, or at the most, two eggs a day may be given, expect in gallstone cases, when the cholesterin contained in the yolk may cause increased elimination by the bile. This is however very doubtful; experiments seem to prove that cholesterin is not absorbed from the intestine as such. Milk, the diet usually prescribed, is not satisfactory and should never be given except with desserts. Fresh cheese may be given and is sometimes well borne, but only in small quantities. Of vegetables, peas, beans, scorzonera, salsify and salads are the best; spinach and tomatoes contain too much oxalic acid. Vegetable diet increases the alkalinity of the plasma and often relieves constipation, producing bulky stools. Vegetables containing sugar are only tolerated in small quantities, with the exception of Irish potatoes, which should be well boiled and mashed with butter. Toasted bread may be given except in gallstone cases, when the cholesterin contained given sparingly. Water or very weak tea are the best drinks; the water should preferably be distilled, in which sal marine tablets have been dissolved, this assisting in the elimination of the waste products

The total fluid taken in the twenty-four hours should be at least 1500 cubic centimeters. In severe cases all of the meat should be boiled so as to dissolve out the extractiveness; no soups or broths should be taken. Probably the quantity of the food is the greatest therapeutic agent, most patients being or having been great meat eaters.

The following prescription is of value in atrophic cirrhosis: Strychnine sulphate gr. 1-60, pulv. folise jaborandi gr. 1, sod. glycocholate mass gr. 5; to make one capsule, t. i. d. Nitrohydrochloric acid is often beneficial. In hypertrophic cirrhosis acetate of potash and nitrate of potash are of value in one or two grain doses. In hepatic colic sodium glycocholate mass in five-grain doses rarely fails to prevent a second attack if taken continuously. Sodium glycocholate C. P. is not well borne by the stomach.

Cancer and Ulcer of the Stomach from a Surgical Standpoint.

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The surgeon who pretends to treat cancer of the stomach and ulcer of the stomach, must draw a distinction between growths other than the mere arrangement of the cells within the growths, because cancer occasionally may be amenable to successful treatment, and ulcer may become malignant. The position of the tumor cancerous or simple, the duration of the growth, and its effect upon nutrition, the age of the patient, his nativity and character, his disposition and occupation, must all be carefully weighed by him who wishes to relieve a patient suffering from a malady of this kind. Since the masters of surgery have shown the profession the wonderful beneficent results in gastric surgery, the inexperienced surgeon has likewise shown his results in precipitating to the grave many patients who have gone to him for relief. If those who have been demonstrating the beautiful drawing of the various operations upon the stomach, should spend more time in teaching the profession when to operate, and less time in illustrating how to operate, more lives would be prolonged, and much suffering averted. It is the painful knowledge of these facts that has prompted me to address you upon this much over-operated organ.

The readiness with which the average surgeon will open the abdomen to make a diagnosis, robs medicine of much of its science and makes of the doctor a mere tool in the hands of advisers of this kind. "Fools rush in where angels fear to tread." I have seen people die from that innocent exploratory incision in the hands of the best operators, and I wish to call a halt on procedures of this kind, until after every effort known to the science has been exhausted to discover the character of the growth in the stomach, because the position of the tumor, the character of the growth, the duration of its existence, the amount of tissue involved, can really always be determined by the means of physical diagnosis, which should be well understood by the doctor who elects to treat these conditions.

The meaning of an exploratory incision has been misconstrued to a great extent, In an article on cancer of the stomach by Osler and McCrea, the following statement is made: "The important aid of an exploratory operation should be more frequently advised. The risk is comparatively slight, and is much less than an undiagnosed neoplasm. In a suspected case, when under treatment, if there is not improvement in a few weeks, an exploratory operation is justifiable."

While resorting to the exploratory incision, we should not forget that it does not give information which is infallible. Very able clinicians have pronounced a simple imflammatory thickening around a chronic ulcer to be cancer. Such careful investigation is sometimes absolutely essential, and it must not be unduly prolonged. The surgeon who resorts to the exploratory incision should first learn when to stop. Every source of information should be exhausted before exploratory incision is resorted to. While a most positive diagnosis cannot always be arrived at by the several chemical tests for occult blood in the stool in a suspected case of cancer or ulcer, free hydrochloric acid in the test meal, the Boss-Oppler Bacillus, etc., the surgeon has satisfied his natural inquiring mind, and, should the patient not recover from a surgical effort to perform some palliative operation, he has at least the satisfaction of knowing that the days of his patient were not shortened in his effort to find out what was the matter. We should bear in mind the classical triad of symptoms of gastric ulcer—Hernatemesis, typical and unusually sharp localized pain after ingestion of food, and excess of free hydrochloric acid; but in ulcer, due to carcinoma, free hydroch-

loric acid is not usually present. Epigastric tenderness, the pain worse on pressure, marked anaemia, accompanied with a history of indigestion and melena is certain proof of ulceration somewhere in the digestive tract. An ulcer of the anterior surface of the stomach, near the cardiac end of the stomach, is usually associated with tenderness between the left costal arch and the median line, and pain is relieved by the dorsal decubitus, but if the pyloris be involved, the tender spot will be between the right costal arch and the middle line, and pain is relieved by lying on the left side. An ulcer of the posterior wall gives rise to less epigastric tenderness and pain is felt beneath the left scapula, or close to the spinal column opposite the attachment of the ninth, tenth and eleventh ribs; pain is relieved by the prone position. Ulcer close to the cardiac gives almost instant pain on ingestion of food; even as the food is being swallowed, the patient will complain of pain. An ulcer of the pyloric end of stomach will cause pain from one to two hours after eating, and since we are familiar with these facts, we are able to judge about what position an ulcer may occupy at any point between these orifices, by taking into consideration the length of time passed after eating food until pain is complained of.

Carcinoma of the stomach is very unusual before thirty-five years, and seldom, if ever, occurs before twenty. Mayo Robson reports one case of a woman twenty-one years, and the same author says, "Whenever a patient over forty years of age complains somewhat suddenly of indefinite symptoms of gastric uneasiness, pain and vomiting, followed by progressive loss of weight, secondary anaemia, and so forth, the possibility of cancer should at once be recognized." And right here, I wish to say that, when a patient shows these symptoms, he is too frequently past the time for a radical operation, and the operation of gastro-enterostomy should not be performed, unless there is stenosis of the pyloris or stasis of food, and this not until the proposition is put fairly to the patient, because the length of life gained, frequently does not compensate for the risk and expense of the operation. The patient has to suffer a sure death, and why prolong his agony unless to demonstrate the wonderful agility of the "operating surgeon." If hydrochloric acid is permanently absent and lactic acid present, the evidence is in favor of cancer. I had one patient who recently died of cancer of the stomach, who had H. Cl. in his stomach on more than

one occasion during his illness, but the diagnosis was made almost beyond a doubt before an exploratory examination was resorted to. While a tumor could not be palpated, its presence was discovered by "deep" percussion. I have found that a tumor can usually be discovered by careful percussion, when palpation fails, by having the patient flex his thighs on the abdomen, and pressing hard over the region of the stomach with the left hand, and systematically going over the region, it will be found that in certain portions of the walls of the stomach in which a tumor or thickening exists, the pitch will be decidedly higher in tone. This particular method has served me well in discovering tumors of the stomach long before the growth had enlarged enough to be palpated. When a tumor of a cancerous origin has grown large enough to be palpated through the walls of the abdomen, the time has passed for an extirpation. There are times when a Gastro-enterostomy is warranted, such as the necessity of prolonging life for business reasons, or in cases where doubts exist as to the true nature of the stricture of the pyloris.

If one were to believe all of the wonderful reports of some authors on the beneficial results following the operation of Gastro-enterostomy, he would be tempted to believe that all of us should at once be subjected to this procedure. A Gastro-jejunal fistula is distinctly a pathological condition, and should not be performed to secure rest in every disease of the stomach, It is the best operation for the relief of stenosis of the pyloris, due to simple ulcer, and is indicated in ulcerations of the pyloric region of the stomach and duodenum which do not heal by rest in bed and medical treatment. It is certainly not of service in Gastroptosis, nor is ulcer of the stomach between the cardia and the seat of operation, an indication for its use,

The most practical and simple way of performing Gastro-enterostomy is by means of the suture after the method of Mayo Robson and Moynihan. The beautiful illustrations in the latter's work on Abdominal Operations have helped me in my experimental work on dogs, and operations on the human. I wish to exhibit three specimens of dogs' stomachs on which the operation of gastro-enterostomy was performed by means of the suture of Pagen-Stechers' celluloid thread, and one specimen in which was used McGraw's ligature. The first specimen was

obtained from the dog at the end of the fifth day after the operation, and it will be seen that union is perfect, but the suture can still be seen along the cut edges of the mucous membrane. The second specimen was obtained on the tenth day, and the suture has apparently sluffed off and been passed by the intestine, while the serous suture has been completely buried by pieces of omentum, which surround the place of union. The third specimen was obtained on the fifteenth day, and likewise the union is perfect. I have come to the conclusion that the patient can be allowed liquid and some solid food on the fifth day after an operation of this kind, without fear of rupture, and he can sit up on the tenth day, if union is good in the abdominal wound, and may be discharged on the 15th day.

The fourth specimen was obtained from a dog on the tenth day, on which I performed a Gastro-enterostomy by means of McGraw's ligature. I have used the Murphy button, and the McGraw ligature, but I believe that day has passed, since both inventors will advise that a supplementary suture be used to surround their respective devices. The time of operation with the suture should be no longer than the button or ligature operation, and I believe is safer from leaks, and possesses the advantage of a large opening in the intestine immediately, which is sometimes very necessary in a starved patient when liquid food may be given in twenty-four hours after the operation.

A cancer of the stomach can exist for a time with no other symptoms than a slight indigestion, and with no other indications than slight eructations of food without vomiting; the patient may say he does not vomit, but, upon careful inquiry, it will be discovered that he "sometimes spits up his food." There may in these cases also be involvement of the liver and spleen, and transverse colon and pancreas, with little or no cachexia. The cancer of the stomach which attracts the attention of the patient early, and of the doctor likewise, is cancer of the pyloris, which at once encroaches upon the lumen of the pyloric valve and causes severe pain, dilation of the stomach, gastroptosis and vomiting. I wish here to report the case of a mechanic, 44, Austrian, who was taken in the latter part of October, 1905, with a slight indigestion and pain some hours after eating. About the 15th of November, 1905, he came to me for treatment, and he was given a bitter tonic, with instructions to return in two weeks. He returned about

the first of December, and reported no improvement; he had lost weight; his stomach was somewhat dilated and prolapsed and contained much partially digested material; he had occult blood in his stools, and when his stomach was not regularly irrigated, he would vomit. There was no free H. Cl. in a test meal, and no tumor could be palpated, though an area over the pyloris orifice 2 1-2x3 in. in diameter was of decidedly higher pitch than normal, A diagnosis of stricture of the pyloris, on account of the presence of a cancerous tumor was made and I decided to do some operation for his relief. I submit the specimen which was removed post-mortem five months after an operation of Gastro-enterostomy. The patient was immediately relieved of his vomiting; he improved wonderfully for a time when he began to fail and at last was confined to his home six weeks, when he died just five months less two days after the operation. While his life was prolonged, I doubt that he was much benefited.

I have also to report a typical case of simple ulcer of the pyloris, and exhibited a specimen of the lower end of the stomach containing the stricture: W. S., 31 years, a farmer, was seen last June; he was very much emaciated, and his abdominal walls were so thin that the movements of the stomach could be distinctly seen; he gave a history of vomiting blood in large quantities five years previously, and, ever since, had suffered from indigestion; he had occult blood in his stools, lactic and hydrochloric acid in his test meal; there was no tumor; the disease had existed too long for a cancerous growth, and his age led me to suspect a simple ulcer; his stomach was greatly dilated, and, when filled with water, seemed to occupy the entire abdominal cavity. The diagnosis was stricture of the pyloris, due to simple ulcer. The operation of gastro-enterostomy was performed by means of the suture. The patient died on the 15th day after the operation from exhaustion. He, in my opinion, had passed the time when he could assimilate food before the operation was performed, as no other cause for his death could be found at post-mortem examination. The specimen will show a long serpiginous ulcer extending well into the duodenum, and almost complete closure of the pyloric orifice. There are valuable lessons to be learned from these typical cases. The first should have had a partial gastrectomy perhaps six months before he knew he was sick, and the last should have been treated to a gastro-jejunostomy

three years earlier. Distress after eating, and vague abdominal pains in the region of the stomach to not always mean cancer or ulcer of the stomach—it might be neurasthenia. My cases of cancer of the stomach had passed the time for a partial gasterectomy when exploration was made. The profesion is very much in need of some means whereby cancer of the stomach can be diagnosed in its very incipiency, or in the precancerous stage, and, until this time comes, I am much tempted to allow general medicine an opportunity to help them round the corner gracefully. We cannot explore every stomach that comes to us for relief. The average length of life, afer partial gastrectomy, is 11 1-2 months; after Gastro-enterostomy, about 5 months, and where cancer existed 9,5 per cent, died from exploratory incison. In Kronlien's 264 cases. A man may live 6 months after cancer of the greater curvature has been made out. A patient with ulcer of the stomach, unless accompanied by structure of the pyloris or dangerous hemorrhage, should be placed upon the poper diet and medical treatment; should these fail, a suitable operation may be performed, either excision of the ulcer, or a gastro-jejunostomy. I am indebted to Dr. Chas. A. Mohr for making the chemical examinatons in the cases reported.

Infant Feeding from Sources Other Than the Mother's Breast.

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Any means of giving the nursing infant nourishment other than from its own mother's breasts may be styled artificial feeding. Even though the services of a so-called wet-nurse are used, from the standpoint of the child it is artificial feeding.

Artificial feeding may be divided into several classes. The following classification being probably as good as any now in use.

Human milk other than that of the mother.

Milk as derived from the cow, goat and other domestic animals,

So-called milk powders such as Peptogenic and others,

Let us take up in the order in which they have been given and try to differentiate the good and bad points in each method.

First, human milk other than that of the mother. Here we come into close contact with several very important questions. Let us begin with a rather important point which is entirely overlooked by a great many of the physicians. A woman's secretions are to a great extent governed by both her strength and her temperament, and we all know there is a great difference in both of these attributes in the women from different portions of this and the European Continent. A mother who cannot nurse her child will ask the advice of her physician in the matter and he will think over the women who are upon his list to be used in such emergencies and will pick out the one in the majority of cases who fits the pocket book of the family, rather than the digestive apparatus of the infant. Suppose just for an instance the mother of the child is a French woman. These women as we are aware are usually of a quick nervous temperament. The physician looks over his list and the next one to be given a case is a large robust woman of Irish birth. Her milk is no doubt good as to quality and abundant as to quantity, but does the physician stop to inquire into other and just as important attributes of both the woman and her milk. Has he ever questioned her about her general and her particular habits? Does he know the condition of her health and the history of her family in so far as regards transmissable disease? Here he is placing an entirely helpless infant into the care of some woman other than its mother to be nourished and cared for. It appears to me that it is a great responsibility to be taken without due thought and consideration. It is a well known fact that a great many diseases may be transmitted through the medium of the mother's milk, so on this account if no other it seems that we should be extremely careful in the selection of a wet-nurse. The infant's temperament will also be affected by the impressions received through a nurse. An otherwise good baby may be completely upset by being plac ed in the care of an uncongenial person.

Think of a healthy child being born into this world of healthy parents, placed in the care of a wet-nurse either because the mother cannot or will not nurse it, to grow up and be affected with some one of the transmissable diseases just because due care was not exercised in

choosing its nurse. Truly there is room here for a world of not only thought, but action upon the part of the physician. There should be common as well as professional sense used in these matters. Let the physician use every argument possible to persuade a mother to nurse her own children and then if at last it does come to the choosing of a wet-nurse, let him here exercise his powers of discernment and choose a nurse who is in every way as good a substitute as can be obtained.

Next in logical order let us take up the subject of milk from the domestic animals as the cow, goat and horse. Naturally the first animal thought of, at least in this country, is the cow. In other parts of the world where cows are not so plentiful as they are here other animals as the goat and horse have to be brought into requisition, but here we rarely have to go to such extremes.

In comparing the qualities of the milk from different sources, it is not my idea at all in this short paper to go into the subject of percentages of fat, sugar, proteid, and so forth. This is more just to show the comparative food values of the different varieties and their modes of preparation. In making the selection of the milk to be used just as much if not more care should be used as in the selection of a wet-nurse.

The domestic animals are prone to disease very much as are we members of the human family. Not only that but many of the diseases from which the human family suffer may be both contracted by and transmitted by the domestic animals. Therefore it is the duty of the physician or some one else in authority to see that the animals are in a healthy state and that their surroundings are such as to be conducive to a continuation of that condition. All sources of the milk supply should be carefully inspected, not at stated intervals, but at unexpected times. We all know if we are expecting to be examined upon any subject, we prepare ourselves to the best of our ability for that examination. The same way with the dairymen; if they know their places are to be examined at a certain time, of course they are going to be in readiness for it even if that is the only time in the year that their place is in even a decent condition. The inspectors should look into the way the animals are fed and watered, at what intervals and also the quantity of both food and water. The stables and sheds as well as the yards and

grazing pastures should be looked after. In this part of the country where cattle can graze practically the entire year there is not so much danger from baled hay and other stored feed. Due consideration should be given to the care the animals are given. Are the stables and more particularly the animals themselves, kept in a clean and healthy condition, for a cow cannot be expected to give good milk if she does not receive proper care.

The milk and the containers both at the stables and at the dairies should be regularly and carefully inspected. Milk is said to be practically sterile when it leaves a healthy animal, but are the hands of the milker clean? Is the can or bucket into which the milk is received clean? Is the milk protected from contamination on its way from the stables or milking houses to the dairy? After reaching the dairy is it handled in a way to insure its being delivered to the consumer in a cleanly manner? And even after reaching the consumer, is it handled in such a way as to be at all in favor of its being a pure article? I am very much afraid a great majority of these questions would have to be answered in the negative both by the dairyman and the consumer.

Now that we have in a very superficial manner I will admit, considered the milk supply, let us in turn consider the milk itself. Here we approach an even, if possible, more formidable question. Cows like people are of different nationalities, only here we call them breeds instead. Their strength and temperament vary just as do the same attributes in the human animal. There are strong and weak cows, well nourished and poorly nourished cows. Some are of excitable nature like our French woman, others do not care what happens just so they get enough to eat and a place to sleep resembling here somewhat the women of some of the countries of southern Europe.

When we take the milk from a herd of mixed cows, and give it to a poor inoffensive infant is it any wonder that once in a while one rebels and raises an out cry. In the cities and especially the cities of the South, where the climate is such that it is difficult to keep even the best of milk fresh and sweet many hours, the question of a proper milk supply for the infant population is a burning one.

There is no doubt but that the proper food for an infant which is

deprived of its own mother's milk, and where a proper wet nurse is out of the question, is the milk from a single cow properly prepared and also properly kept between the time of being brought from the cow and being taken by the child.

This brings us very naturally to the subject of how to prepare the milk of the cow so it will be assimilated by the child It is well known that there is quite a difference between the two commodities. Raw cow's milk is different in several respects from the human product. It is hardly necessary at this time to go into these differences, but suffice it to say that before cow's milk is given to the infant, it should be so changed or modified that it will be adapted to the peculiarities of the child. And in this matter each and every child is a law unto itself. What will be entirely satisfactory to one child in the way of a food will act almost as a poison to another.

There have been a great many sets of rules and formulae written at different times and by various authorities upon the subject of diseases of infants and children, but as no two children are alike in all respects it naturally follows that the formula which agrees with one child will not prove beneficial to the next one.

So the less we stick to set rules in adapting our milk preparations to our infants, the better success we are going to have with these cases. How are we going to tell when a certain preparation is the proper one? The only sure way is by watching the child. Careful examination of its secretions and excretions from time to time are indicated. Watch its weight, seeing if it is gaining, and if so whether the gain is a proper one. Is the child putting on flesh or not, and if it is what is the nature of that flesh? Is it soft and flabby, or is it good solid healthy meat? A child may look fat and stout, and yet if you push your finger into that flesh, your slight pressure leaves a lasting impression. That is hardly what we would call healthy growth, and yet perhaps the mother is being deceived by it. Later on when the child's limbs begin to bend and bow its temper gets bad, and there is no sleep at night for it or its parents, the mother will begin to see the error of her ways and cast about for some means of bringing about a change.

Right here and now is where the professional knowledge and also the tact of the physician are taxed to the uttermost. You intimate to the

mother that she does not know how to take care of her offspring, and immediately there is trouble and very probably a change of physicians. Such an emergency calls for the most judicious handling. The mother must not be placed in the wrong, and yet a radical change must be made. This part of the subject I will leave to each physician to handle as he sees fit.

This brings me to my last subject, the use of the so-called milk powders for the home modification of cow's milk. To my mind the less said about them the better. At best they are a poor make-shift, and in the hands of a young and inexperienced mother, who does not understand them, they are worse than useless, and in fact may be harmful. To be used at all these powders should be perfectly fresh and then be used by some one who understands their workings. They may be all right in the North, but personally I think I have seen more harm from their use here in the warm climate of the South, than I have seen good.

To sum up, human babies were meant to be fed upon human milk, and if anything occurs whereby an infant is deprived of its proper source of nourishment, it is up to us as physicians to look about and find some adequate means of taking the place of nature and doing for these poor waifs what their natural source of supply either cannot or will not do.

The Differential Diagnosis of Surgical Lesions in the Upper Abdomen.

By J. Norment Baker, B. A., M. D.,

Montgomery, Ala.

The veil of uncertainty—not to say, oftimes, of mystery—which enshrouds lesions in the upper abdominal zone, serves as a powerful stimulus to a more careful and detailed study of the physical signs, the symptoms and the history of each individual case.

Much thought, much writing and much experimental work has been done, with a result which is highly gratifying; for in no branch of surgery has the field been more clarified and simplified than in this one.

At the outset, in considering this subject, let it be remembered that

no elaborate laboratory outfit is necessary or even desirable, a few of the simpler devices sufficing. It is the clinician who carefully develops the history of his case and who displays sound judgment and coherent reasoning in arranging the points elicited—here including from the train of symptoms points apparently trivial; there eliminating, what, on the surface may seem important, yet plays no part in arriving at the proper deductions—he it is who most often will make the most accurate and most satisfactory diagnosis.

Crowded into a very small area—an area, which on the external surface of the abdomen may be represented by a circle whose radius does not exceed an inch and a half or two inches—are the organs which the surgeon has to bear in mind when making a diagnosis in this region—viz: the gall bladder and its ducts, the pylorus and the pyloric end of the stomach, the first portion of the duodenum, the head of the pancreas, and the upper pole of the right kidney. Behind these is the solar plexus of nerves which has not inaptly been termed the abdominal brain, and to which is referred, primarily, irritation of the peritoneum arising in any portion of the abdominal cavity; as for instance, the first storms of an acute appendicitis or an inflamed Meckel's diverticulum, are first registered at this point. Or, to borrow from Treves—"There are certain symptoms common to all disorders within the abdomen at the outset, in which a sudden and violent impression is made upon the great nerve centers."

Not alone must the organs above mentioned, which are so clearly related anatomically, be always considered, but others, while more remotely located, owing to the community of symptoms displayed by every abdominal organ, have to be considered and scrupulously eliminated; such as appendicitis, intestinal obstruction, twisted ovarian pedicle and the like.

In order to simplify and abbreviate as much as possible, let us take up each symptom separately, and see wherein they agree and wherein they differ when affecting the various organs under consideration.

First, Pain: When called upon to interpret pain of the upper abdomen we have to hold in mind, first of all, lesions of the gall bladder; second, ulcer and cancer of the stomach; third, ulcer of the duodenum; fourth, appendicitis; fifth, kidney stone; sixth, pancreatitis, and last, but not least, the pain of a pleurisy or an intercostal neuralgia.

The pain of gall stones, when typical, is of sudden and violent onset, coming on most frequently from four to six hours after eating, and often at night, referred to the stomach and extending oftimes directly back to the right sub-scapular region, being described by the sufferer as sharp, stabbing, or lancinating. Not infrequently the radiation will be to the right, or upward, with a full, bursting sensation accompanied by more or less dyspnoea, due to the spasm of the diaphragm. This is the referred pain. The localized pain may be of a dull, aching type, or of a more acute, intolerable type, depending largely upon the intensity and extent of the infection and inflammation. This localized pain persists for a variable extent of time after the spasmodic attack has ceased. Von Leube considers this tenderness of the lower margin of the liver and of the gall bladder as one of the most valunable differentio-diagnostic points and in its absence is inclined to leave the diagnosis in suspense until more trustworthy criteria become evident. Where there has been much infection in the gall bladder, I have seldom seen this sign fail.

This hypersensitiveness is best elicited by forcibly hooking the fingers under the margin of the right costal arch over the gall bladder region and instructing the patient first, to forcibly inspire and then expire; as the diaphragm forces the liver down, the impingement of the sensitive gall bladder against the examining fingers, suddenly cuts off the inspiration.

Further, a gall bladder which has once become so markedly infected as to produce a localized peritonitis of more or less severity—which fact is elicited by the history of persistent tenderness—temperature, and possibly rigors and sweats—has most certainly drawn to itself, by adhesions, the omentum, stomach, or other portion of the digestive tube. When such a condition exists, there follows a train of vague digestive disturbances, which, on the surface, tend to incriminate the stomach and the patient pictures himself as being a sufferer of chronic indigestion. Only by delving carefully into the past history of such a case, possibly reaching back many years for the starting point of the initial trouble, can a proper valuation be given to those symptoms and the organ really at fault be located.

Lastly, in an acute attack of gall stone colic the disappearance of the pain is almost as precipitate as its appearance, and often there is an immediate return to health.

The pain of gastric ulcer may be sudden, sharp and severe, and is most frequently localized in the region of the pylorus; the radiation is not so marked, and is most often downward or straight backward to the left sub-scapular region. This dorsal point of tenderness is emphasized by Boas. The position of posterior tenderness is located at the level and to the left of the tenth to the twelfth dorsal vertebrae. This point has added weight when it is remembered that it does not exist in any other disease of the stomach or liver. As a rule, the pain has decided relation to meals, coming on a short time after food ingestion.

Following in the wake of a healed gastric ulcer, more particularly if it has been located at the pylorus so as to produce more or less obstruction and consequent gastric stagnation, will be found a host of digestive disturbances resembling closely those produced by adhesions resulting from gall bladder disease. A differentiation in such cases is exceedingly difficult, and our best guide is the clinical history presented.

The pain of gastric cancer is not characteristic and is not trustworthy; it is not of a radiating character unless there is serious involvement and it is not paroxysmal. Food ingestion usually augments the pain, coming on soon after meals. While pain, of a vague and indefinable nature, is nearly always present, it is not unlike that of chronic gastric catarrh, and too great reliance must not be placed in it.

The pain of duodenal ulcer may likewise be sudden and severe and like the gastric ulcer, rarely radiates beyond the gastric or duodenal area. Posterior tenderness can seldom be demonstrated. As a rule, the pain presents a decided relationship to meals; at first the taking of food gives relief, pain appearing from three to six hours later, when the stomach should be nearly or quite empty; the pain is due, not to the passage of food over the ulcerated area, but to the action of the chyme delivered from the stomach; the intensity of the pain and the degree of gastric acidity appear to run almost parallel.

The pain of acute appendicitis is sudden and sharp; manifests no particular relation to meals and may radiate in any or all directions. The point of maximum tenderness is most usually McBurney's point, although there may be many exceptions to this, dependent upon the position of the appendix which is prone to make many departures from

the normal—sometimes being found posterior to the ascending colon and reaching as far as the liver. In such an unusual location pain, if relied upon as a diagnostic point, would lead us into gross error.

The pain of acute pancreatitis is sudden and very sharp; there is little or no tendency to radiation, being located just above the umbilicus; there is no relation to the taking of food, and the pain and prostration simulate those of acute perforative peritonitis.

The pain of kidney stone resembles in character that of gall stone colic in its violence and severity. Starting in the flank of the affected side it radiates downward along the ureter to the testicle and inner side of the thigh. It has no relations to meals; its termination is as sudden as the onset.

The pain of a pleurisy involving the lower lobe of the lung or the diaphragm may mimic closely any of the abdominal lesions mentioned. A careful physical examination of the chest should set us aright and should always be made as a routine procedure.

Nausea and Vomitiig: In gall stones, these symptoms are frequent and are responsible for the heavy burden imposed on the stomach in making a differential diagnosis. The vomiting may be violent and persistent, usually lasting not more than one to several hours, and, as a rule, is not protracted. The vomitus shows nothing diagnostic.

In gastric ulcer, vomiting occurs at various periods in the history of the ulcer. It usually comes on soon after meals—from half an hour to one hour—and shows, most often, an increased amount of free hydrochloric acid. The vomitus, in about fifty per cent of cases, will show at some stage of the ulcer, blood in macroscopic quantities; in some instances it may be slight; and of either bright red or of a dark color; coffee-ground vomit rarely occurs in gastric ulcer. The bleeding, however, may be latent—the so-called occult bleeding—for the detection of which the Webber test is employed. Yet in gastric ulcer we should not more wait for hemorrhage in order to make the diagnosis than we should delay the diagnosis in gall bladder disease awaiting the appearance of jaundice.

In gastric cancer nausea and vomiting play an important role. If the cardiac end be implicated—which is comparatively rare—the vomiting comes on immediately after food ingestion and is small in quan-

tity; if in the pyloric end—the most usual site—vomiting may be delayed one to three hours. As the case progresses and the pylorus becomes obstructed, the vomitus assumes the features of dilatation and stagnation. It may be an almost daily symptom or it may occur at prolonged intervals. The vomiting of blood is a fairly constant symptom; while sometimes so profuse as to be dignified by the term hemorrhage, yet most often it takes place as a slow oozing, which, when intermixed with the gastric juices, gives the so-called coffee-ground vomitus. The persistent total absence of free hydrochloric acid is a valuable sign, especially in one who has passed the meridian of life; yet it is not pathognomonic and too great stress must not be attached to it.

In duodenal ulcer vomiting is a prominent symptom, coming on, as a rule, several hours after the taking of food. Hyperacidity is also the rule, though generally not so marked as in gastric ulcer; gas formation is also a prominent feature, often producing great distress by frequent eructations. The vomitus may contain blood, but this is not so constant as in gastric ulcer or cancer. Intestinal hemorrhage is more common than in the other conditions and the occurrence of a sudden intestinal hemorrhage with gastralgic attacks is very suggestive of duodenal ulcer.

The physical signs obtained in these various lesions are also important. They should be taken up in the routine order—inspection, palpation, percussion and auscultatory percussion. The time allotted this paper will not permit of a detailed comparison of the signs presented by the various lesions under discussion. After each procedure has been gone through, the patient's stomach should be inflated either with a stomach tube and a Davidson's syringe, or by means of a Seidlitz powder, each part being given separately. By this means important information can be gotten as to the dimensions of the stomach and the more exact relation of any existing tumor to the other parts of this region.

In conclusion, I have endeavored to group together the chief points which will be found helpful in arriving at a correct differential diagnosis of what might be called the surgical lesions of the upper digestive tract. Yet the clinician must not allow himself to be baffled if, in many instances, he fails to so adjust these facts as to be able to draw from them a conclusive picture. The very interdependence and close

anatomic relationship of these structures preclude this. Rather let me say, when all the evidence has been summed up, this is, or is not, a diseased process of such a nature as to demand surgical interference. If it be surgical, and the patient experiences relief thereby, be little cares whether he has been treated to a cholecystotomy or a gastro-enterostomy.

The Surgical Reduction of the Nasal Tip of Excessive Length.

By Charles C. Miller, M. D.,

Chicago, Ill.

The long nasal tip is frequently seen. It gives to its possessor credit for being of prying disposition and at the same time mars the appearance.

Featural conditions are not to be regarded with scorn by the general practitioner, for a demand has developed for surgeons capable of operating successfully on these cases and the profession must recognize this demand.

While the regular profession refuse to consider these featural operations seriously thousands of patients are driven to unscrupulous charlatans who after fleecing them are as liable as not to subject them to the grossest of malpractice in their efforts to carry out their extravagant claims.

Many operations are practicable for correcting featural imperfections, and I do not beleve there is in the United States today a surgeon who gives this entire subject the attention it deserves, for practically nothing is heard of the subject in the medical press, excluding, of course, the consideration of the paraffin injection processes. The introduction of paraffin bid fair to develop a field of work which would enlist many of our most capable surgeons, but the unforseen disadvantages of this method of treatment coupled with the comparatively little improvement in appearance secured by its practice threw a damper upon the entire subject of featural surgery. Advertisers following the demands of the people have established themselves in the larger cities and are treating a considerable number of patients, but for every one they treat fifty might be cared for by reputable practitioners,

for the great majority of those who seek relief of featural imperfections are too intelligent to consider for a moment submitting themselves to advertisers.

Justification of my attitude toward these conditions should not be difficult if I can avoid prejudice on the part of the profession for the man who is desirous of wearing a well fitting suit is in the same position as the man who would have some defect of face corrected, if such defect can be corrected without danger to him. I have introduced the word man intentionally for the surgeon interested in featural operations will find a remarkably large number of the male sex consulting him.

Women today take more independent position in the world than formerly. Few are satisfied to hold their places as wives simply by being a useful member of the partnership. Woman appreciating that in the married state she is not secure during the lifetime of her husband, as was the case more frequently in the earlier days, she is giving more attention to her personal appearance so that she may, at least. as long as she desires, be secure in the possession of her husband. Women confidently admit this in consulting for the correction of featural imperfections.

The reduction of the nasal tip is one of the more satisfactory of the featural operations, for the surgical attack is made entirely within the vestibule of the nose and the surgeon has no fear of visible scars being left after operation.

This operation may be performed in any physician's office and only the simplest equipment is necessary. The operation does not require a general anesthetic, infiltration being sufficient to permit of a painless operation.

For infiltrating the tip of the nose, an ordinary hypodermic is used. The parts are distended until pricking with the needle point is painless.

The nasal tip should be freed from the septum. To accomplish this the scalpel is carried directly under the tip and it is loosened so that it may be displaced and the divided base everted into either nostril.

The excess of tissue making up the tip is cut away with curved scissors. This operation is one in which the beginner is likely to err on

the side of conservatism. The tissues are fairly dense and as they are d stended with the infiltrating fluid the operator in his first case usually fails to remove sufficient tissue.

If the alae nasi are of excessive thickness they should be incised within the nose and their excess removed with scissors or scalpel. Bleeding may be controlled by compression of the tip between the thumb and index finger. Should the operator compress the tip for five or ten minutes after completing his dissection and find the hemorrhage to continue it may be well to cease the compression long enough to pass a suture into the base of the freed tip and through the septum so that the tip may be secured in its normal position. Without this suture the tip is liable to be displaced and healing occur with it deviated slightly to one or the siae.

These patients may attend to their daily affairs without loss of time. The suture anchoring the tip should be removed in four or five days.

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Recumbency in the Treatment of Infantile Paralysis.

By Adoniram B. Judson, M. D.

New York.

In the ever-changing treatment of disease the influence of environment is receiving unusual attention, as is seen in the management of tuberculosis of the joints. The influence of the lapse of time is also better understood. Medicines are given in small doses for very long periods, and the effect of time on the body are more clearly seen to influence the course of disease and the action of remedies.

In the treatment of infantile paralysis I propose a method which relies exclusively on the influences of environment and the lapse of time, It is applicable only in the very early stage, before the case is likely to be seen by an orthopaedic surgeon. As soon as the disease is recognized I would limit the patient to the recumbent position till there is no possibility of further recession of the paralysis. The period of spontaneous recession extends over several months. During this time the difficult task must be undertaken of keeping a child, well in every other way, off his feet at an age when he should be learning to walk.

In some cases eighteen months should be occupied in this way. The common belief that such a patient requires exercise, especially of the affected limbs, will give rise to criticism and objections. A simple argument will not prevail in the family circle, and the physician's work will hardly prevent the little patient from having many a romp. And when the case ends there will be differences of opinion. If some lameness results, it may be said that the patient should have had more exercise, and if there is no disability at all, after the strict observance of recumbency, it may be said that there had been very little the matter with the child.

The argument is as follows: It will be recalled that the ill effects of joint disease are seen more commonly in the lower extremities than the upper because tuberculous action is subject to resolution in the epiphyses of the shoulder, elbow and wrist, but often goes on to destruction of the articulating surfaces of the hip, knee and ankle. And when it is noted that the arms are free while the legs bear the weight of the body it is reasonably inferred that the joints of the lower extremities when affected, or even suspected, should be protected by either recumbency or appropriate apparatus. The conclusion is a plain proposition and needs no discussion or verification. It shares the simplicity of Jenner's argument when he traced the relation of cause and effect and prescribed vaccination. In another field Finlay, walking with his eyes open, apprehended the relation of cause and effect and prescribed the sequestration of the mosquito.

The necessity of reforming the environment of the lower extremities having been derived from clinical observations of joint disease, can practical conclusions be drawn in a similar manner from observing the course of infantile paralysis? Disability from this disease is seen eight times as often in the lower as in the upper extremities, and yet in the early stage the paralysis is found in all parts of the motor nervous system. The muscles of the recumbent patient are in very moderate use and in a position entirely favorable to spontaneous recession of the paralysis. The arms and hands retain this advantage when the patient is erect, but the impaired muscles in the legs and feet give way at once when they meet the resistance of the weight of the body, They rapidly become elongated and attenuated, and could not well be placed in an attitude more destructive of the possibility of restoration.

When prescribed recumbency shall give to all parts the same environment, recession of paralysis will be equally encouraged in the lower and upper limbs, the disproportion of 8 to 1 will disappear, and the sum of deformity from this disease will be materially reduced.

The value of the method is thus *proved,* but it is not readily *demonstrated.* When comparing methods it is not easy to show that one is better than another. It may always be said that a case cited in behalf of a certain method may have been one that would have done well under any treatment. Tables of carefully recorded cases might lead to correct estimates, but studies of this kind are difficult and have not escaped criticism. Dr. Gaillard Thomas said with wit and wisdom that if there is anything more misleading than facts it is figures. Medicine and surgery are still outside of the realm of exact science. Therefore we welcome every logical and reasonable resource of prevention and treatment.

Passive motion, resistance exercises, electricity, massage, local applications and judicious medication should be continued. They cannot interfere with the treatment proposed, and their observance may make it easier persistently to maintain recumbency, the most important agent of all.

Some Remarks on the Treatment of Nephritis.*

By K. Bradford, M. D.,
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There is nothing original in this paper, but I think you will all agree with me that a brief review of certain facts bearing on the treatment of this complex disease is well worth our while. Let us recall in a general way the principles governing the treatment of inflammations: viz: Rest and protection—sparing the kidneys by giving them as little work as possible to do until their functional activity is regained in acute cases; or until this activity is completely lost in chronic and hopeless cases.

To apply these principles we must depend almost solely on dietetic and protective therapy on the one hand, viz., to give nephritics only those substances that are easily digested and assimilated yielding in

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*Read before Birmingham Medical Library Association, July, 1907.

products readily excreted. On the other hand we must refrain from giving anything that will prove irritating or call for increased effort in elimination. The latter class we must be thoroughly familiar with to govern our treatment accordingly. Fortunately they are not many and their avoidance is comparatively an easy matter. First we have urea, and as this is an end product of proteid metabolism we avoid an excess by limiting our amount of proteid food (meats and milk chiefly), but always keeping the caloric value of the daily diet normal by supplying the deficiency with other less harmless foods.

For example. A 150 pound man at rest needs about 1875 cal. If we try to supply this on an exclusive milk diet it will require over 3 quarts a day, the patient receiving 110 to 120 gm. of protein, an amount that we are trying to avoid.

This means also a total of 35 gm. of urea to be excreted, a task that acutely diseased kidneys are funtionally unable to do. What is the result? Retention of urea and its circulation in the blood, and as it is the most powerful stimulant we have of renal activity there is permanent irritation. This alone proves to us that an exclusive milk diet is far from harmless.

Creatinin. This we avoid by withholding strong meat extract and meat broth. It is present in traces in the white and the yolk of eggs and in milk, but not in quantities sufficient to be reckoned with.

Urinary Pigments. Urobilin and hematoporfirin we avoid by excluding articles containing hemoglobin, as bovinine, red meat juices, etc. We also must avoid such drugs as sulphenol and trional which have a tendency to decompose hemoglobin.

Phosphates and Phosphoric Acid. These are present in milk, quite abundant in fact; to neutralize them and rid the kidneys of handling these irritants we should give calcium carbonate 10 gr. t. i. d. in the milk.

Water. Some kidneys of acute nephritis cannot excrete water. We must be governed accordingly. Flushing out the kidneys has done much harm, so go slow on water unless when you give it there is a proportionate increase of diuresis.

Inorganic sulphates. These are derived from the proteid molecule so the rules for avoiding them are the same as those mentioned for urea.

Hippuric Acid. Green vegetables, fruits containing kernels and cran-

berries contain large quantities of benzoic esters and should be avoided. We will take up the renal irritant under special treatment. There are of course times when we must resort to symptomatic treatment by drugs and mechanical means, but these certainly are of secondary importance. Always in our efforts to spare the kidneys we must be careful lest this be carried to the point of injuring other organs.

Finally. Physic treatment is important here as it is in every organic disease. Do whatever will encourage the patient and not hurt him. By all means spare him from frequent urinalyses, except in acute nephritis and not always there, the amount of albumen is no index to the severity of the disease.

Now let us take up in a little more detail the treatment of first, severe cases of acute nephritis with diminished urine, increasing oedema and impending uremic symptoms. Avoid diuretics, limit diet to smallest quantity of milk (about one pint a day); to combat thirst small quantities of water or ice may be given. This procedure certainly spares the kidneys; the patients usually take kindly to it and it may be persisted in for four or fve days until the picture changes for better or worse.

Second. Cases in which a secretion of water is reduced, but absolute suppression does not threaten, oedema is moderate. Here again milk is our chief article of diet, but not over a quart and a half per day reinforced with a pint of rich cream; this gives a food value that will require an enormous quantity of milk to supply. If the patient needs building up vary the diet by adding other articles that contain little proteid, as oat meal gruel, cracker gruel, white bread zwiebach, grape juice, a pint bottle a day. This latter has a good caloric value, is pleasant to take and a good renal stimulant. Restrict the water unless there is a corresponding urinary increase. For oedema hot air is indicated, but stop it when the kidneys begin to secrete freely and don't give water at the same time lest you defeat the object in view. Don't use purgative, rely on diet and sweating in acute nephritis and remember to go slow on water. In many cases with uremic symptoms it is best to give no food at all for a couple of days and patient will often take kindly to this.

This brings us to the convalescent stage of acute nephritis. The administration of food should be abundant, but not over two and one-

half quarts of milk a day; to this may be added cereals, cooked fresh fruit like apples and pears; vegetables as peas and beans; cream cheese; finally small quantities of meat either dark or light. Grape juice does well here as it stimulates diuresis and helps the appetite.

Sweating is unnnecessary if oedema is disappearing and diuresis is abundant. Patients who recover slowly will derive much benefit in a dry climate like Arizona, Southern California and Egypt. There oedema disappears and they recover rapidly or pass into a condition of chronic nephritis which we all know is compatible with years of active life.

Chronic Nephritis. This is an essentially chronic condition persisting for years even in the least favorable cases and we must govern our treatment accordingly. To prolong the course of the disease and enable these patients to continue their work for years should be our aim and to accomplish this we must protect the kidneys, spare and strengthen the heart and build up the body generally. We must treat the kidney lesion and in addition bear in mind that every case of contracted kidney must be treated like a sufferer in heart disease. For in reality the condition of the heart in the end determines the fate of these patients. Physic treatment is very important here; make them take a hopeful view of the future as many are capable of performing their routine work despite the disease. Above all things refrain from making their peace of mind dependent on urinary examinaion. It is bad practice to carry the restriction of diet as far here as in acute nephritis, for in so doing we would spare the kidneys but spoil the patient. Cut out alcohol except in renal asthma and to stimulate digestion. Tea, coffee and tobacco should be prohibited or reduced to a minimum, for they waste the reserve energy of the heart. Cut out radishes, mustard, peppers and ginger and give little celery and asparagus. Be careful about giving irritating drugs as turpentine, carbolic acid, copaiba, mercury and its salts, solicyalates and iodides. As these patients usually show arteriosclerosis we will be tempted to give iodides, but it will cause trouble for 50 per cent or more of iodides taken into the system are eliminated through the kidneys. Iodoform has even given trouble when used as a dusting powder. We must have a variety of diet including 69 oz. meat, 3 glasses of milk and two eggs a day to keep up the amount of proteid.

Aside from exceptions given patients may take what they like, but over feeding is dangerous because of its effect on the heart.

Water should not be increased, for though the kidneys can excrete it it is a load on the heart, and the amount should not exceed 2 1-2 pts a day including liquids of all kinds. In many cases of contracted kidneys sensible restriction of water may save life, but it is hard to do, for these patients suffer so from thirst. A good rule to follow is that of Van Noorden's in which he allows one day a week in which his patients may have as much water as they like claiming that this periodic flushing out is very beneficial. If one of these patients suddenly takes a turn for the worse we should immediately institute rigid measures to spare the kidneys; but where there is no hope the diet should be liberal and the desires and tastes met as far as possible.

Climatic treatment deserves important consideration; a dry equable climate meets the indications. Diuretics and heart stimulants may be used if they cause improvement in the heart's action and increase diuresis, otherwise if we prolong their use in an effort to force results retention and accumulation with serious consequences will follow.

Briefly, for the oedema we resort to diaphoresis and restrict the fluids. For the uremia hot packs, purgation and venous lavage. Strengthen the heart by light and gradually increased exercise, this also benefits the muscles and circulation; exercise should only be stopped in the terminal stages, that is when the kidneys become insufficient and heart complication sets in. Then there is no rational treatment and we must content ourselves with giving the sufferer as much relief as possible.

A Report of an Interesting Case.*

By R. T. Hill, M. D.,

Montgomery, Ala.

Gynecologist to the Hill Infirmary; Fellow of the Southern Surgical and Gynecological Association and Senior Counsellor of the Alabama State Medical Association.

This woman came to me from Georgetown, Ga. Small physique, 22 years old and primipara. She was taken in labor some distance in the

*Read before Alabama State Medical Association, April, 1907.

country. After waiting several days for the child to be delivered the attending midwife sent for a physician who found the head of the child wedged in the pelvis. Forceps were applied and delivery completed. The child was dead. The convalescence of the mother was slow and perilous, caused by severe pelvic inflammation attended with great sloughing of the outlet. The entire septum between the vagina and bladder was destroyed, leaving an opening about two inches antero-posterior diameter. The uterus could be felt per rectum and was unusually small. The cervix could not be detected and was thought to be concealed in the cicatricial tissue, which was present in great abundance. The vagina was practically destroyed. The only opening was the one leading into the bladder. The vesical openings of the ureters were seen at the posterior margin of this opening. The remaining bladder wall had inverted through the false opening to such an extent that its mucous surface appeared between and external to the lips of the vulva. In other words the bladder had turned inside outwards through the opening made by the destruction of the vesico-vaginal septum. The urethra was not destroyed, but was separated from the bladder, except in front, at its internal opening. The patient was very much emaciated and extremely weak. I undertook to find the cervix uteri by carefully dissecting through the cicatricial tissue, intending to split its anterior wall transversely and to utilize the flap, thus formed, in closing the bladder opening, by stitching its lower margin to the urethra. Failing to find the cervix, it, in all probability, having been destroyed by the sloughing process, I changed my plans and directed the dissection just behind the bladder and into the peritoneal cavity, freeing the bladder, as suggested by Kelly, posteriorly and laterally so as to bring the posterior margin of the false opening downwards and forwards to the urethra, making a vesico-vaginal septum of bladder wall. In the hurry necessitated by the poor condition of the patient the separation was not as thorough as it should have been, and consequently there was such tension on the stitches as to prevent proper union. The result, however, was a diminution of the opening more than one-half. At a second operation the bladder was more thoroughly freed posteriorly and laterally. In freeing the bladder the right ureter was injured, notwithstanding a catheter was used as a guide, and sprang a leak several

days later. At a third operation I followed the leaking tract to its opening into the ureter. Finding this near the bladder wall I simply enlarged the vesical opening of the ureter, so there would be such a free outlet for the urine as to make infiltration an impossibility, and then closed the fistulous tract. All went well for two or three weeks when on being distended the bladder sprang a leak at the left end of the line of union. This was closed under local anasthesia. The work was now completed as far as the bladder was concerned, but the uterine cavity had not been given an outlet, though a vagina about two inches in depth had been secured. After the first operation I concluded to leave the uterus alone until it could be seen whether the vesico-vaginal septum could be restored without utilizing any of the uterine tissue. If this could be done, then, to remove the uterus by the upper route rather than undertake to make an opening through the cicatricial tissue to its cavity. There were two considerations that led me to this conclusion: (1) If an opening was established it would, in all probability, give much trouble by a constant tendency to close, and thereby defeat the very purpose for which it was made, viz., escape of the uterine discharge. (2) The probability of another pregnancy was not desirable. I noticed, however, during the time, which was some three months, I was working to close the bladder there was no manifestation of the menstrual function. Recalling the size of the uterus I began to suspect that this function would not again appear. My suspicion proving well founded, nothing further was done as I saw no indication for further interference. The patient when last heard from was in perfect health.

It is interesting to speculate on the cause of the disappearance of the uterine function. I am inclined to believe the destructive inflammation following her confinement caused an obliteration of the uterine cavity. Now, I know it is claimed that an obstruction of a ureter as by tying will cause a cessation of the function, and eventually atrophy, of the corresponding kidney. Reasoning by analogy it might seem that an obstruction of the cervix could cause the disappearance of the uterine function, but practical observation hardly supports such a conclusion.

I think I may, in conclusion, truly say the result in this case adds no little to the accumulating evidence of the marvelous possibilities of present day surgery to rescue human life from a miserable existence.

Abstracts.

SEPARATION OF THE URINE OF THE TWO KIDNEYS.

George Luys of Paris brings forward a new method for the separation of the urine of the two kidneys, by means of the endo-vesical separator. The advantages of this method are that it is more simple than ureteral catheterization, that it is without dangers, that it is so easily applied that it may be used in many more cases than a more complicated method, which can be praticed successfully only by a specialist, and that the information is quite as exact and valuable as that of the other method.—*Medical Record,* August 3, 1907.

VENEREAL PROPHYLAXIS—A PROBLEM IN SOCIAL HYGIENE.

Roswell S. Wilcox of New York says that infinite tact, patience, and perseverance will be necessary to check the progress of venereal disease. The best method of prevention is the education of the public, man, woman, and child, to a proper knowledge of the sexual functions, their use and abuse. They must be taught that sexual continence is not harmful, but beneficial. The parents must be educated, and must educate the child, as soon as it begins to ask questions, teaching by comparison to natural processes in the vegetable world. The school may also teach. The French system of regulation of prostitutes is considered to be a failure. The public must learn that the stoppage of the visible discharge in gonorrhea is not a sign of cure, that latent gonorrhea is the most dangerous, and that this is a severe and dangerous disease, also that syphilis is curable, may be innocently acquired, and if untreated will infect the offspring—*Medical Record,* August 3, 1907.

THE DIAGNOSIS OF APPENDICITIS.

The following from the pen of Dr. J. B. Murphy, concerning the diagnosis of appendicitis is too valuable to be allowed to rest where the practicing physician cannot see it; it deserves to be printed over and over again.

Following up an experience of operating in more than two thousand cases, Dr. Murphy says: "The symptoms of acute appendicitis are, in

my experience, in the order of their occurrence: 1. Pain in the abdomen, sudden and severe; 2. Followed by nausea or vomiting; 3. General abdominal sensitiveness; 4. Elevation of temperature, beginning from two to twenty-four hours after the onset of pain. These symptoms occur almost without exception in the above order, and *when that order varies I always question the diagnosis.*" (Italics by Dr. Murphy.) Other items in his paper are concerning temperature; in acute appendicitis it must always be present, it never precedes the pain. In two thousand cases it was always present in the early stage of acute appendicitis.—Dr. E. S. Bailey, in the *Clinique.*

TWO NERVE WRECKERS.

Perhaps it would be hard for us to go back to the days when we had no telephones and no automobiles, but it is altogether probable that both these nefarious inventions are shortening the lives, not only of physicians, but of everybody else who uses them to any extent. The physician who for years drove good Dobbin around, did not arrive at his patient's home as quickly as he does nowadays; but the jog-trot gait was much less wearing on the doctor's nerves than the onward rush of the auto. Before the days of telephones the doctor kept an office boy, who was always ready and alert to send with a message. Now the office boy is gone and the doctor takes down the ear piece, waits a long while for central, and in a few minutes he is given the "wrong number," much to his exasperation, and greatly to the injury of his usually placid nerves. While the average death rate in former days may have been larger than it is today, yet nobody has the temerity to assume that the lower death rate is in an even remote degree due to the advent of the telephone. The general public that is daily being irritated by the presumably horrible service of the average telephone company; that is dodging automobiles on the city streets, and is being choked in the lungs with the dust raised by the autos in the country, has much complaint to make. Nerve specialists find their duties largely increasing, and the unfortunate thing is that they are constantly meeting with harder and harder nuts to crack in their specialty. How much of this is due to the much vaunted telephone and the gaseous automobile, who can say?—*Med. Sentinel.*

A CRUSADE AGAINST FLIES.

There has recently been undertaken in Glasgow and Liverpool a crusade against house-flies which are now recognized at potent factors in the spread of typhoid fever and, perhaps, of other diseases. The suppression and destruction of flies necessitates a careful study of their life history, not only in the summer months, but during the winter, that the larva may be destroyed and the annual crops of young flies prevented. Further, attention has been called to the fact that the wasp is the most effective destroyer of flies, and, on that account in fly crusades, the people are urged not to molest wasp nests.

The attention of sanatarians to the spread of disease by insects doubtless arose from the discovery of the spread of malaria by mosquitos, but at this time we know that not only flies and mosquitos, but cockroaches and bed-bugs have spread disease.

It has been shown that the house fly can be the medium of transmission for anthrax, cholera, tuberculosis, filariasis, certain inflammatory eye affections, plague, typhoid fever, intestinal parasites, and wound infections It has been suggested that the fly is also a factor in the spread of gonorrhea, smallpox and various skin affections.—*Ill. Bulletin.*

THE EVOLUTION OF GASTROENTEROLOGY.

Henry Wadle Bettmann of Cincinnati finds that new impetus has been given to researches as to the physiology of the digestive system. As to gastric peristalsis, emotions inhibit it and handling the intestines does the same. Operations close the pylorus for six hours. The impulse for the closure of the pylorus is due to the reaction of acid chyme. We have recent additions to the knowledge of the movements of the intestine. There is an oscillatory movement that breaks up the food masses, but does not propel it forward. By antiperistalsis the bowel contents are churned about in the cecum until most of the liquid is removed. The small intestine is inhibited by vagus stimulation, and excited by the splanchnics. True peristaltic waves are caused by stimulation of Auerbach's plexus. Knowledge of the chemistry of digestion has been much increased. Pepsin is secreted before food enters the duodenum. The excitor of pancreatic secretion is secretin, produced by the action of HCl on the duodenal mucosa. The upper small intestine secretes,

while the lower absorbs. Gastric digestion is relatively unimportant. The study of the feces gives valuable information. Mucus means inflammation, if visible in the colon. Purulent mucus means ulceration. Connective tissue remains in the stool means impaired gastric digestion. Intestinal disorders are hepatogenic, pancreatogenic, or essential intestinal. Too good a digestion leaving little residue, may cause constipation. The intestinal bacteria offer a new field for investigation. As old age approaches intestinal putrefaction is easier. There are the indolic type, the saccharobutyric, and the combined types. Cholecystitis is practically always due to infection.—*Medical Record,* August 3, 1907.

THE NEED OF EARLIER DIAGNOSIS.

J. N. Hall of Denver emphasizes the fact that early diagnosis in many diseases is of quite as much importance as accurate diagnosis. By waiting for a complete picture of the condition existing we may sacrifice the chance of the patient for his life. We must be more prepared to assume the responsibility of tentative diagnosis. The author cites as examples early tuberculosis, diphtheria of the larynx, empyema, and many abdominal conditions. Among these are gall-stones, gastric ulcer, and appendicitis, in which exploration will end in cure.—*Medical Record,* August 3, 1907.

THE WIDAL REACTION IN TYPHOID FEVER.

This test has limitations, states A. T. Laird (*Ann. of Surg.*, March, '07). Its value depends partly upon the technique. A suitable culture must be used and the patient's serum must be collected and diluted to a certain degree. Some cases of typhoid do not show the reaction; a positive finding on the other hand, is sometimes obtained in the course of other diseases, or even in health. Nevertheless the test is of clinical value, and when repeatedly and carefully made should show the reaction in nearly all cases. It can so rarely be obtained from healthy serum or where there are diseases other than typhoid, that the occasional reactions secured from such patients do not greatly diminish the value of the test. While not decisive the Widal reaction is certainly of equal value with any of the clinical symptoms of typhoid.—*Med. Times.*

EMBOLISM.

A. Hall (*Practitioner,* March, '07) declares that the circulation, like any other system of pipes and tubes, may become deranged, plugging or embolism being one of the possibilities. This lesion is favored by the variation in the diameters of the vessels. It is also dependent upon a pre-existing morbid condition, which produces in the blood stream a substance which cannot circulate. The locus in the circulatory system where the embolus occurs depends upon the size of the latter; and with regard to the embolus the circulation may be divided into: the part extending from the systemic venules to the pulmonary arterioles; another from the pulmonary venules to the systemic arterioles; and a third from the gastro-intestinal venules to the interlobular portal venules. These three parts are separated by impassable capillaries. There are two types of embolism: multiple embolic aneurisms, which originate from valvular vegetations of the left heart associated with rheumatic or infective endocarditis and which are rapidly fatal if they attack the intracranial vessels; and pulmonary embolisms which usually begin as thrombi in the systemic veins, death occurring suddenly and without premonition.—*Med. Times.*

THE BACTERIOLOGICAL DIAGNOSIS OF TYPHOID FEVER.

At the time when the intestine was considered the chief seat of the Eberth bacillus, the bacteriological diagnosis of typhoid fever was confined to the examination of the stools, and the methods used were troublesome and often unsuccessful. Castellani and Schottmuller were the first to make systematic blood cultures and to get almost constant positive results. The former removed twenty cubic centimeters of blood from a vein and added it to nine hundred cubic centimeters of bouillon, which was placed in three flasks. After twenty hours the sedimented blood looked dark, while the supernatant bouillon looked cloudy; one cubic centimeter of this culture yielded a pure typhoid growth in eight hours on Dregalsky-agar. This method proved to be the most satisfactory of those used during the past two years in von Leyden's wards, and it can easily be carried out in private practice. In the *Zeitschrift fur klinische Medizin,* Vol. 63, 1907, F. Meyer publishes the results of twenty-four such bacteriological examinations all but one of which

gave positive results. In two of his patients the temperature was never any higher than 100.6 degrees F., nor did they show any typical clinical symptoms, and in such cases, especially, the importance of an early diagnosis, from both a hygienic and a therapeutic point of view, is evident. The finding of the typhoid bacilli in the blood explains their presence in the kidneys, spleen, and other organs, and directs the therapy in a more successful direction, *i. e.*, by means of serum. We may conclude from Meyer's results, and in view of the fact that patients suffering from typhoid fever frequently display but few clinical symptoms, that a blood culture should be taken in every typhoid suspect, and that a positive Widal reaction should not be waited for before a diagnosis of typhoid fever is made, especially as the former is positive early, while the latter at times does not occur until convalescence has set in. Blood examinations are therefore an important advance in the early diagnosis of typhoid fever, and by means of them a beginning epidemic may often be detected and possibly averted.—*Med. Record*

PHYSICIANS' FEES.

We believe that the average income of the average physician in the United States is considerably less than $1000 a year. The average brick-layer, carpenter or plumber earns more than this. A country physician recently told us that he was called to drive several miles into the country to see the wife of a prosperous farmer. His fee was $4 and was objected to as being too much. On the same day the same farmer cheerfully paid a veterinary surgeon $10 for driving the same distance to see a valuable horse. The farmer did not value the life of his horse above that of his wife, but he had grown accustomed to cheap medical services and he thought the horse doctor's services must be worth more because he charged more for them.

The average patient of the country doctor (the farmer and the country merchant) is better able to pay good fees than is the average patient of the city doctor; for, while the latter has a few rich patients, he has a great many poor ones. When the farmer or the country merchant comes to the city to consult a physician he expects to pay and does pay a good fee, and he can well afford to pay a good fee at home, and would more highly appreciate the value of his physician's services

at home if a good fee were demanded of him. It is a difficult matter for one physician in a community where the medical fee has been long established to raise his charge, but where the physicians are well organized it should be an easy matter for them all to do it at the same time. We think that in all communities it would be a good thing for the older and best-known physicians, those who have been long in practice, to charge higher fees than the younger men, especially for night work and for obstetrics, thus giving themselves more leisure at probably no loss of income and giving the younger men a better chance.

It is well known that among the majority of people a man is estimated at his own value of his own services, and this is particularly true of the members of any one profession. Why are lawyers' services and the services of other professional men estimated so high, not only by individuals, but by corporations? Simply because they have set a high value upon their services and they will be more highly regarded and their services more highly appreciated by those whom they serve. We do not mean that the poor or those of moderate means should be obliged to pay more than they can afford for medical attention.

The greatest virtue of physicians has always been and always will be their charity. The poor will be cared for cheerfully and for nothing, those of modest means will be cared for for what they can afford to pay, but let those who can well afford it, and particularly corporations, be made to pay their physicians on a scale which will bring the compensation of the medical profession up to the level of the other professions. Both the medical profession and the people will be the gainer when this condition shall be brought about.—*St. Paul Medical Journal.*

The early diagnosis of gastric carcinoma is set forth by W. G. Thompson (*Cleveland Med. Jour.,* March, '07), who believes that operation is justified when the patient's age is within the average cancer developing period (between 40 and 65 years); when there is a rapid and decided loss of weight and strength without other assignable cause, such as chronic gastric catarrh, neurasthenia, mental strain or worry, diabetes, or other chronic general disease; when there is evidence of some degree of stagnation of food contents in the stomach; when there is failure to improve markedly under treatment after a few weeks' trial.

Under these four conditions exploration should be seriously considered despite the absence of gastric pain or other marked gastric symptoms. There may also be a leucocytosis of 12,000 to 16,000 with polynucleosis and a moderate anemia with low color index; a decided dilatation of the stomach, occasional attacks of vomiting, often without definite relation to food ingestion; occult or visible blood in the vomitus or stools, and epigastric or right hypogastric rigidity or tenderness.—*Med Times.*

"SLOW FEVER."

"Slow fever" of the Southern States was described by Dr. H. F. Harris, of Atlanta, Ga., in the Section on Practice at the last meeting of the American Medical Association. This article will do much good in the way of rousing our Southern brethren to a realization of the fact that typhoid fever exists everywhere and in myriad forms and that public health compels us to consider every continued fever as typhoid until it is proved otherwise—a new fever must not be "discovered" until the old kinds are excluded. "Slow fever" is surely not malaria, for the organisms are not found and quinin is ineffective. Harris stated that in over half of his cases the typhoid bacillus was demonstrated, the paratyphoid in one-fifth, and both in 2.2 per cent. It is safe to say that one or the other was really present in most if not all of the 26 2-3 per cent in which nothing was found.

The typhoids of hot climates are generally milder than those of cold, though no one seems to know why, unless it be due to the fact that the bacillus is injured by tropical heat. Nevertheless, physicians who practise in northern communities where typhoid is endemic, report that they have numerous cases which are the same as the "slow fever" of the South, so that the mildness of southern typhoids may be more apparent than real.

Short fevers of unknown cause are called 'ephemeral," "febricula" or "simple continued" according as they last one, two or more days, but if they continue over four days, it is good policy to label them typhoid and be done with it, for this course is safest for the patient and community. This system is best while we are investigating the causes of the short tropical and subtropical fevers. These are believed to be due to digestive disturbance, unknown hemic parasites or the sun's rays;

but it is quite evident that the "slow fever" of Dr. Harris does not include these. In this respect it is quite unfortunate he should have perpetuated the name "slow fever," for both it and "mountain fever" should go the way of "typhomalaria." It is of national importance; for the widespread ignorance as to atypical typhoid and the prevalence of as many other names, were the causes for the failure to prevent the awful spread of typhoid in the camps of 1898. The first cases were mislabeled. At the present time, too, the failure to recognize the disease merely allows it to spread and will cause disastrous results if large numbers of people congregate in the infected districts. It is even wise to suspect that paratyphoid is a modified typhoid, and to do away with this name also.—*Ed. Comment in American Medicine.*

HEART STIMULANTS.

"Some drug to stimulate the heart is indicated at one time or another in almost every case of serious illness, especially in those that are long continued and which drain the vital forces. There are many remedies that are classed under this head in text books, but they cannot be substituted indiscriminately one for the other. Although they all stimulate the heart, the effect is brought about in different ways, and each one has other effects upon various portions of the system.

Just which drug it is best to use in any particular case is not always an easy matter to decide. An ignorant or careless physician may do great injury to a patient in a critical state by using the wrong stimulant.

Let us review the action of the ordinarily used drugs of this class and see just when they are indicated.

Alcohol quickens and strengthens the beat of the heart, and relaxes the vessels over the entire surface of the body, producing a sense of warmth, but not raising the blood pressure to any great extent. It is a useful drug in most cases of sudden faintness and in the collapse which occurs during long, exhausting diseases. One of its chief merits is that it acts quickly, other wise in some of these cases it would be better to use a drug which raises the blood pressure more decidedly.

Digitalis slows and strengthens the heart beat, contracts all the capillaries and greatly raises the blood pressure. It lengthens the diastole

of the heart. For this reason it is useful in many conditions of valvular disease, but when there is aortic regurgitation the lengthening of the diastole is a disadvantage, for the blood then has a longer time to run back into the ventricle. In these latter cases cereus grandiflorus is the drug of choice, for it raises the blood pressure slightly, at the same time strengthening the heart and accelerating its rate. The effect is somewhat similar to that of strychnia, but the influence of the latter is distributed over the entire system, while cactina acts more directly upon the heart and blood vessels. As it has no cumulative effects and does not disturb the stomach it may be profitably used in nearly all cases of valvular troubles or functional weak heart.

The effect of nitroglycerine (glonoin) is to quicken the heart and to greatly relax the capillaries, being somewhat similar to alcohol in this respect. It acts with great rapidity and is soon eliminated. It is much used in cases of internal congestion and does not irritate the brain as alcohol does.

The action of strophanthus is to slow the heart and to increase the force of its beat. But it raises the blood pressure only slightly. In cases of faintness produced by hemorrhage; or when hemorrhage is feared, this is the drug which usually gives the best results, the best action of the heart compatible with safety."—*The Antiseptic.*

THE ROUTINE TREATMENT OF SYPHILIS WITH INTRAMUSCULAR INJECTIONS OF MERCURY SALICYLATE.

Palmer holds that mercury salicylate possesses the advantage of causing no gastrointestinal irritation. Painful nodosities at times develop at the site of injection, though these are of minor import. The slow conversion of mercury salicylate into a soluble salt and its subsequent absorption allows the injection of a considerable quantity of the drug at one time, thus necessitating but one visit a week to the physician One of the disadvantages attendant on the injections of salicylate, or indeed upon any insoluble form of mercury, is that incident to what is supposed to be pulmonary embolism. Half a minute after injection the patient experiences a dry cough, accompanied by a feeling of tightness in the chest, faintness, nausea, and air hunger. The cough usually persists for several days, during which time the sputum may be blood-tinged. Fatalities have been reported. Syncope is sometimes observed

in nervous patients. Injections are usually driven into the gluteal region on account of the great mass of muscular tissue in that locality. Occasionally the interscapular region is employed, but then for only two or three injections. Each buttock should be divided into six or more injection sites. The injection should be administered alternately on either side. Liquid albolene is considered the best suspension medium, 1 part of the salicylate being employed to 10 parts of the fluid. Sterilization before use is not necessary, since abscesses do not develop when the suspension is freshly prepared and injected immediately without previous sterilization. None the less nodosities are likely to be frequent when the solution is kept for a long time and is not sterilized.

Any form of syringe may be used, but the piston should be provided with a check screw so that the dose may be accurately graded. The needle should be about 1 1-4 to 1 1-2 inches long and of 21 gauge size The patient is placed face downward upon a suitable table and the site for injection is selected. The horizontal position is to be preferred as the gluteal muscles are more relaxed in this position. The portion of the buttock selected is thoroughly rubbed with a mixture of equal parts of alcohol and ether, and the piece of gauze used for this purpose is left in place while the physician thoroughly shakes the bottle containing the injection fluid in order to make the suspension as complete as possible. Somewhat more than the amount to be injected is drawn into the syringe, and the needle is then attached. The syringe is inverted, and any air bubbles are expelled together with sufficient suspension fluid to make the amount in the syringe the exact quantity desired for administration. The gauze wipe is then removed and the needle is plunged quickly into the gluteal muscles for 1 to 1 1-2 inches, depending upon the musculature of the individual. This must be done with extreme rapidity and by a sudden stab, since thus no pain will be inflicted. The syringe is at once detached from the needle; its lumen is watched for half a minute to make sure that a vein has not been punctured. Should bleeding be free the needle is reinserted; if not, the syringe and the needle are connected and the suspended salicylate is slowly injected into the tissues, whereupon the needle is removed and the place massaged for fifteen minutes. Primary injections consist of 1-2 grain of the salicylate or 5 minims of the 1-to-10 suspension. The first injection is gen-

erally followed in two days by a second injection of 3-4 grain. In four days 1 1-4grains is administered.

It is stated that in order to treat syphilis properly the patient must be kept on an amount of mercury a fraction of a grain less than the quantity known to produce symptoms of merculialism, and it is always better to produce a slight gingivitis or other symptoms of mercurialism, and in this way to find out how much mercury is necessary to keep the patient under control, instead of giving smaller doses without a knowledge of the patient's tolerance. In three-fourths of all patients 1 1-4 grains every seven days will suffice to keep the patient under control. At times this dose will have to be materially increased.—*Ther. Gazette.*

DIAGNOSIS OF EARLY PREGNANCY.

"L. J. Ladinski describes as diagnostic of early pregnancy the following sign elicited by bi-manual palpation. Frequently as early as the fifth week, but always in the sixth week, there can be felt in the median line in the anterior wall of the body of the uterus just above the junction of the body and cervix a circular area the size of the tip of the finger, which presents the sensation of an elastic fluctuation. This area increases in size in a crescentic manner, until between the third and fourth month, when nearly the entire anterior body, with the exception of the upper crescent of the fundus, partakes of this change, and gives the cystic fluctuating feel to the examining finger. The change appears in the anterior wall of the uterus when the uterus is in the normal position or slightly anteverted, but in extremely retroverted or retroflexed uteri the elastic area appears in the posterior wall, but instead of being perceptible in the fifth or six week of pregnancy is usually felt in the sixth or seventh week. In incomplete abortion or subinvolution there is a change in the consistency of a similar area of the uterine wall, but while in pregnancy the feel of this area is distinctly elastic or cystic, the sensation obtained in subinvolution and incomplete abortion is soft and doughy".—American Jour of Obstetrics.

Editorial.

W. H. BELL, M. D., Editor.

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The Jefferson County Medical Society.

This society is having perhaps the best year in its history. Composed as it is of some of the best men of the profession in the South, its membership numbering about two hundred and twenty-five, it is perhaps the leading county medical organization in the South. At the beginning of this year it decided to hold weekly meetings instead of bi-monthly as had been the custom, A program was arranged and published for every meeting during the year. So far this program has been carried out with surprising few failures on the part of those appointed to prepare and read papers, and the papers have been of high character. The first

meeting night in each month was arranged for a clinical meeting, at which time many very interesting cases have been reported. The committee also arranged to hold occasionally during the year joint meetings with other organizations, as the Bar and Druggist Associations, for the reading of papers and discussion of subjects of mutual interest to the professions taking part. The last meeting was one held with the Druggists' Association. The subjects discussed by members of the Druggists' Association at this meeting were, "Patent and Proprietary Medicines," by Jno. L. Parker; "The Relation of the Druggist to the Physician," by John W. Patton; and "The New Pharmacopeia," by Arthur W. Moody. After the reading of these papers a free discussion of the subjects was had by members of both professions. Altogether the meeting was most interesting and will result in good to the members of both professions.

The Bryce-Insane Hospital.

The report of the commission appointed by the legislature to investigate charges of cruelty and mismanagement of the Bryce-Insane Hospital at Tuscaloosa has been filed in the office of the governor and made public. In this report the commission claims to have made an exhaustive investigation into the charges of cruelty and mistreatment of patients and the insufficiency of the food supply, and gives as their conclusion that in an institution of the magnitude of the Bryce-Insane Hospital, it is well nigh impossible that an occasional act of undue violence or maltreatment at the hands of a certain class of nurses that may find employment therein, will not occur, but it is the deliberate judgment of the commission that this is not due to neglect or inefficiency on the part of the superintendent and his staff of assistants and supervisors, but rather due to the inability of the supervisor, on account of his many duties, to have an eye at all times on every detail of the establishment.

The commission recommend that a greater variety of food be furnished the patients, and that the salaries and wages of the nurses and employes be graded according to their length of service and efficiency. To meet the increased expense resulting from these recommendations they recommend an increased appropriation sufficient to make the weekly allowance for each patient four dollars. The commission closes its

report saying that it "is of the opinion that the institution is one of the greatest and most valuable of its kind in the South, and indeed a place where the people may safely entrust their afflicted and unfortunate."

Thus we see as was predicted in the July number of the Journal that Dr. Searcy, the superintendent, has been exonerated by the commission. The doctors of Alabama had sufficient faith and confidence in Dr. Searcy to feel assured that the investigation would exonerate him.

We agree with the commission that the several hundred of the "old, feeble and decrepit men and women afflicted with some mental and all sorts of physical ailments, and classed as 'indigent insane'" should be provided for by the different counties in their alms houses, thereby giving more room at the hospital for those acutely affected who may stand some chance of cure.

A good deal of sensationalism has characterized this whole investigation. It is very unfortunate that one of our best public institutions, which has always been held in the highest esteem by the people of Alabama, and which in fact is one of the best State institutions for the care of the insane in the whole country, should have been the subject of so much harsh and uncalled for criticism. Many of the charges after exhaustive investigation were found to be absolutely untrue, notwithstanding the efforts made to prove the contrary; and none of them were shown to be due to inefficiency or neglect on the part of the superintendent or his medical staff. It is our opinion that the management of the hospital could not be placed in safer or better hands, and only increased amount of funds could make improvement in present conditions.

The Southern Medical Association.

As announced in the last number of the Journal the meeting of the Southern Medical Association will be held in this city September 24th, 25th and 26th. A good attendance is hoped for and expected. Dr. H. H. Martin, of Savannah, Ga., is the president; Dr. Mack Rogers, of Birmingham, Ala., is vice-president; and Dr. Raymond Wallace, of Chattanooga, Tenn., is secretary. This is the Gulf Branch of the American Medical Association, and comprises the States of Alabama, Georgia, Kentucky, Mississippi, Louisiana, Florida and Tennessee. The

councillors for the different states and the chairmen and secretaries of the different sections are among the most prominent men of the South, and those attending may expect a good program and a most interesting meeting.

The New Law Increasing Salaries for County Health Officers.

We publish below the law recently enacted increasing the salaries of County Health Officers.

AN ACT.

To amend section eight (8) of an act entitled An Act, to amend, reconstruct and provide for the enforcement of the laws relative to the public health.

Section 1. Be it enacted by the legislature of Alabama, that section eight (8) of an act entitled an act to amend, reconstruct, and provide for the enforcement of the laws relating to the public health be so amended as to read as follows:

Section 8. That the salary of the health officer of a county shall be fixed by the court of county commissioners, or Board of Revenue, provided that in counties of ten thousand inhabitants, or less, the salary shall not be fixed at a lower rate than twenty dollars per thousand of population, and further that in counties of more than ten thousand inhabitants the decrease in the above rate shall not exceed ten cents per thousand of population up to a population of 100,000, beyond which no further decrease shall be made. The salary for the health officer of a county shall be computed upon the basis of the last United States Census, and shall be paid quarterly from the county treasury by the officer legally authorized to draw warrants on said treasury. The health officer of a county shall be computed on the basis of the United payable to the judge of probate of the county in a sum equal to the amount of his salary with condition for the faithful performance of all such duties as are, or may be, required of him by law; provided that nothing in this section shall be so construed as to prohibit the commissioners courts, or boards of revenue, of the several counties of the State from paying the health officer of their respective counties a larger sum as salary than the minimum provided for in this act, if in their judgment they deem it wise to do so.

Approved August 9, 1907.

The Influence of Anti-Toxin Upon Post-Diptheritic Paralysis.

According to the statistics of various observers, paralysis occurs after diphtheria in from five to twenty-five per cent. of the cases. To what degree its frequency is affected by the anti-toxin treatment is difficult to say. Some have even claimed that it is more common in the cases treated with anti-toxin than under the old methods of treatment. Rosenau and Anderson have recently made some interesting studies of the effect of the anti-toxin on the post-diphtheritic paralysis in the guinea pig. Claiming that diphtheria in the guinea pig closely resembles the same disease in man, and that post-diphtheritic paralysis in the guinea pig is an almost exact counterpart of the same complication in man, they give experimental evidence showing the relation of anti-toxin to post-diphtheritic paralysis. Their work was done with "partially neutralized mixtures containing sufficient toxin to produce early and malignant paralysis." While this may not produce exactly what happens in the spontaneous diphtheritic infection in man, their conclusions are very interesting and suggestive in giving answers to the following very important and practical questions, viz:

Can anti-toxin influence diphtheritic paralysis after the paralysis has appeared?

Can anti-toxin influence diphtheritic paralysis when injected shortly before the paralysis develops?

How long after infection can anti-toxin influence paralysis?

Can anti-toxin, given before infection as a prophylactic, prevent post-diphtheritic paralysis?

They conclude that: "In the guinea pig anti-toxin cannot influence the diphtheritic paralysis after the paralysis has appeared.

"Anti-toxin has no influence in preventing post-diphtheritic paralysis if injected shortly before the paralysis develops.

"Anti-toxin given twenty-four hours after the infection can save the life of the guinea pig and greatly modify the paralysis.

"Anti-toxin given in a single large dose forty-eight hours after the infection did not modify the paralysis or save life. Thus, in our experiments, 4000 units failed to modify the paralysis or save the life of guinea pigs weighing about half a pound. Weight for weight this corresponds to 400,000 units for a fifty-pound child.

"Anti-toxin given in repeated injections beginning twenty-four or

forty-eight hours following infection seems to have a more favorable effect upon the subsequent paralysis than a single injection.

"A very small quantity (one unit) of anti-toxin given twenty-four hours before or at the time of infection in our experiments prevented the development of the paralysis.

"In man we would expect more favorable results from the use of anti-toxin than our work upon the guinea pig indicates, for we were dealing with an early and malignant form of experimental post-diphtheritic paralysis. This grave variety is, fortunately, rare in man. Further, we injected the entire charge of the poison directly into the tissues of the guinea pig, while in man the toxine is doubtless elaborated more slowly. We may therefore assume that anti-toxin serum, given at a somewhat later period than in our work upon guinea pigs, would exert beneficial effects.

"The fact that one unit of anti-toxin prevents paralysis and saves life when administered timely, whereas 4,000 units totally fails when delayed forty-eight hours, emphasizes the importance of using this sovereign remedy early."

The Examination of Applicants for License to Practice Medicine.

The State Board of Examiners will hold a meeting beginning about October 1 next in Montgomery for the purpose of examining applicants for license to practice medicine in Alabama. This will be the first meeting of the kind held by the Board under the new law, which went into effect on Sept. 1.

Personal Notes.

Dr. W. H. Neal, of Vick, Ala., was in the city on the 2nd.

Dr. J. G. Staples, of Birmingham, has returned from a visit to Gallion, Ala.

Dr. B. G. Copeland, of Birmingham, has returned from a visit to several eastern cities.

Dr. R. C. Curtis, of Garnsey, Ala., was in Birmingham on the 31st ult., and called to see us.

Dr. Carl Fox, of Birmingham, has returned from a month's stay in Canada and Nova Scotia.

Dr. W. C. Williams, of Gadsden, Ala., honored the Journal with a pleasant call while on a recent visit to this city.

Dr. W. H. Sanders, our worthy State Health Officer, passed through Birmingham on the 3rd inst. and honored the Journal with a call.

Dr. S. C. Meigs, of Centreville, Ala., a prominent practitioner and the mayor of his town, called to see us while in Birmingham a few days ago.

Dr. H. S. Ward, of this city, leaves on Sept. 10 for a year's stay in the medical centers of Europe for study. The doctor has promised to let our readers have an occasional letter from him during his absence.

Dr. Nat G. Clark, former Physician Convict Inspector, moved from his former home, Ensley, Ala., to Boulder, Colorado, last month, where he will engage in the practice of medicine. The best wishes of the Journal go with him to his new field.

Dr. J. D. S. Davis, of this city, returned Sept. 1 from a trip to Europe, where he had been for rest and recuperation for the past two months. During his absence the doctor had considerable repairs and improvements made to his infirmary.

Dr. Geo. S. Brown, of Birmingham, returned on Sept. 1 from a stay of several months in Atlantic City and other places in the North and East, and resumed charge of his hospital in this city. We are glad to see the doctor looking so well, and hope the salubrious effect of the "sea air" may continue to be felt by him for many months to come.

Dr. James S. McLester, 830 South Twentieth St., Birmingham, wishes to announce that he will be absent from his office for purposes of study from October 1, 1907, to October 1, 1908.

Miscellaneous Notes.

THE DRUNKARD'S DAUGHTER.

(By a young lady who was told that she was a monomaniac in her hatred of alcoholic liquors.)

Go, feel what I have felt,
  Go, bear what I have borne;
Sink 'neath a blow a father dealt,
  And the cold, proud world's scorn.
Thus struggle on from year to year,
Thy sole relief a scalding tear.

Go, weep as I have wept,
  O'er a loved father's fall;
See every cherished promise swept,
  Youth's sweetness turned to gall;
Hope fades, flowers srewn all the way
That led me up to the woman's day.

Go, kneel as I have knelt,
  Implore, beseech, and pray,
Strive the besotted heart to melt,
  The downward course to stay;
Be cast with bitter curse aside,
Thy prayers burlesqued, thy tears defied.

Go, stand where I have stood,
  And see the strong man bow;
With gnashing teeth, lips bathed in blood,
  And cold and livid brow;
Go, catch his wandering glance, and see,
There mirrorer his soul's misery.

Go, hear what I have heard,
  The sobs of sad despair,
As memory's feeling fount hath stirred,
  And its revealings there
Have told him what he might have been
Had he the drunkard's fate foreseen.

Go, to my mother's side,
And her crushed spirit cheer;
Thine own deep anguish hide,
Wipe from her cheek the tear;
Mark her dimmed eye, her furrowed brow,
The gray that streaks her dark hair now,

The toil-worn frame, the trembling limb,
And trace the ruin back to him,
Whose plighted faith, in early youth,
Promised eternal love and truth,
But who, foresworn, hath yielded up
This promise to the deadly cup,

And led her down from love and light,
From all that made her pathway bright,
And chained her there mid want and strife,
The lowly thing—a drunkard's wife;
And stamped on childhood's brow, so mild,
That withering blight—a drunkard's child;

Go, hear and see, and feel, and know
All that my soul hath felt and known,
Then look within the wine-cup's glow;
See if its brightness can atone;
Think of its flavor you would try,
If all proclaimed, Tis drink and die!

Tell me I hate the bowl!
Hate is a feeble word;
I loathe, abhor, my very soul
By strong disgust is stirred
Whene'er I see, or hear, or tell
Of the DARK BEVERAGE OF HELL!

—*Tex. Med. Journal.*

"MEDICAL" vs. "SURGICAL" DYSPEPSIA.

Referring to the radical stand taken by many surgeons who regard dyspepsia symptoms as an indication of gastric ulcer or carcinoma, calling for surgical interference. "The Clinical Review" says: "It is not at all uncommon at present for surgeons to advise gastro-enterostomy for patients who exhibit nothing but delayed digestion, with symptoms of nervous dyspepsia." Abram of London criticises this position of the surgeons and remarks "In any place where such opinion holds ground it must be risky to complain of any chronic discomfort referred to the stomach." He concludes that:

"1. The diagnosis of gastric ulcer is made too readily, the majority of so-called cases being really examples of chronic dyspepsia.

"2. The largest group of chronic dyspepsia is formed by cases of 'intestine dyspepsia.'"

The peculiar value of chologestine (digestive cholagogue) in the treatment of intestinal dyspepsia is due to its combination of cholagogue, intestinal antiseptic and digestive properties. The contained bile acid salt exercises a true cholagogue action, which is enhanced by the stimulating effect of the natural sodium salicylate (from oil of wintergreen) upon the secretion of the biliary fluids; both of these ingredients exert a distinct antiseptic effect and thus control fermentation and flatulence.

ANTIPHLOGISTINE VERSUS OPIUM.

Inflamed states of the various organs of the body frequently give rise to pain of such urgent character as to demand active steps looking to its relief. Upon seeing the patient for the first time (he has called his physician because his suffering has become intolerable), the medical attendant is met with a peremptory demand for relief from the suffering.

With a willingness, which frequently overrides their better judgment, some physicians resort to the hypodermic needle indiscriminately, and, in too many cases, a greater evil has followed the lesser one. The free habit of using morphine or some other form of opium is not a judicious practice, and for several reasons. The exact seat of an inflammation, for instance, might become difficult to locate, and thus a clear diag-

nosis interfered with. But the greater recruit to the ever growing army of habitues.

Every time there occurs to a doctor the apparent need of opium he should deliberate well before resort is had to the needle. If, after careful consideration, his best judgment advises the use of opium, it should be given in some form by mouth. If the needle is used the patient at once knows what he is getting, but he is not so likely to acquire this information if it be given otherwise.

For relieving the pain of the inflammations antiphlogistine will easily take the place of opium. The relief following may not be so prompt and so complete, but the edge of the suffering is taken off within a short time, and soon the patient is in a comfortable condition and has escaped the possibility of becoming addicted to a drug. There is not the likelihood that a patient, relieved from pain by it, which likelihood is the greatest disadvantage of opium.

In the future let your morphine become stale, and keep your antiphlogistine fresh—use it in inflammation.—*The Medical Era.*

INCREASING FEES.

From all over the country comes the complaint from the members of the medical profession that their fees are not high enough. Reference is not made to the fees of the specialists, who can set their own prices; but to the doctor who performs the every-day tasks of the visiting physician— whose especial work is among the lower classes, and the lower middle classes of society. Wages in every line of labor have advanced. Groceries, house rent, fuel, clothing—everything that the physician has to buy has gone up, but in most localities the doctor's fees remain where they were when all that he had to buy cost from one to two-thirds what it costs today. Everybody is enjoying the benefits of the prosperous era that has come upon the country, except the physician. We are gratified to see that the physicians of some localities have arisen to the force of the situation, and have adopted a new scale of prices. Our attention has been called to an advertisement in a Coeur d'Alene paper, signed by the physicians of the city, giving a new and enhanced scale of charges, which certainly are small enough in all conscience. A similar concerted advance should be taken in every locality throughout the United States, in justice to the physicians and their families.—*Med. Sentinel.*

PUBLIC HEALTH LABORATORIES.

(Chemical and Bacteriological)

London Hospital Medical College, London, E., and Chelmsford.

February 1, 1907.

Results obtained upon analysis of a sample of Meatox prepared by Charles Marchand, of New York, and submitted by Messrs. Lamont Corliss & Co., Jan. 10, 1907, contained in hermetically sealed bottles.

The material submitted was in a granular condition, of yellow colour, faint meaty odour and of an agreeable flavour.

After digesting in water the material became soft, and when placed under the microspoce it appeared to consist of muscular fibre more or less altered by the action of heat. Tests were made for detecting the presence of preservatives, but no indications were obtained of their presence. Even the amount of salt present was under one per cent.

The chemical analysis gave the following results:

Moisture	5 per cent
Fat	12.1 per cent
Assimilable Proteid	73.8 per cent
Extractive matter (less gelatine)	7.7 per cent
Ash	2.05 per cent

The fat was examined and corresponded in character with the fat from oxen.

The preparation no doubt contains all the constituents of beef, in a very dry and therefore stable and concentrated condition. It is about five times the strength of fresh beef.

John C. Tresh.

AMENDMENT TO SECTION 401 OF THE PENAL CODE OF NEW YORK.

Section 401 of the Penal Code has been amended so as to read as follows:

Any person, who, in putting up any drug, medicine or food or preparation used in medical practice, or making up any prescription, or

filling any order for drugs, medicines, food or preparation puts any untrue label, stamp or other designation of contents upon any box, bottle or other package containing a drug, medicine, food or preparation used in medical practice, or substitutes or dispenses a different article for or in lieu of any article prescribed, ordered or demanded, or puts up a greater or less quantity of any ingredient specified in any such prescription, order or demand, than that prescribed, ordered or demanded, or otherwise deviates from the terms of the prescription, order or demand by substituting one drug for another, is guilty of a misdemeanor; provided, however, that, except in the case of physicians' prescriptions, nothing herein contained shall be deemed or construed to prevent or impair or in any manner affect the right of an apothecary, druggist, pharmacist or other person to recommend the purchase of an article other than that ordered, required or demanded, but of a similar nature, or to sell other article in place or in lieu of an article ordered, required or demanded, with the knowledge and consent of the purchaser. Upon a second conviction for a violation of this section the offender must be sentenced to imprisonment, for a term of not less than ten days nor more than one year, and to the payment of a fine of not less than ten dollars nor more than five hundred dollars. The third conviction of a violation of any of the provisions of this section, in addition to rendering the offender liable to the penalty prescribed by law for a misdemeanor, shall forfeit any right which he may possess under the law of this state at the time of such conviction, to engage as proprietor, agent, employee or otherwise, in the business of an apothecary, pharmacist or druggist, or to compound, prepare or dispense prescriptions or orders for drugs, medicines or foods or preparations used in medical practice; and the offender shall be by reason of such conviction disqualified from engaging in any such business as proprietor, agent, employee or otherwise, or compounding, preparing or dispensing medical prescriptions or orders for drugs, medicines or foods or preparations used in medical practice.

Section 402. This act shall not affect or impair any liability, penalty or punishment under the provisions of section four hundred and one as the same existed prior to the time this act takes effect, but the same

may be enforced, prosecuted or inflicted as fully and to the same extent as though this act had not been passed; and all actions civil or criminal instituted under or by virtue of said section as the same existed prior to the passage of this act, and pending immediately prior to the taking effect hereof, may be prosecuted and defended to final effect in the same manner as though this act had not been passed.

Section 403. This act shall take effect September first, nineteen hundred and seven.

THE USE OF ADRENALIN DURING ETHER ANESTHSIA.

By Charles S. Venable, M. D., Charlottesville, Va.

Recognizing that my experience in the use of adrenalin during ether anesthesia is but very limited, covering a course of only eighteen cases, and knowing the many fallacies attendant upon too early conclusion, I feel a great hesitancy in making this report. However, owing to the uniform result that has attended its use, I am prompted to do so now.

I found that 25 per cent. aqueous solution of the standard 1 in 1,000 gave the best results, and that by first pouring ether in the towel core and spraying the adrenalin solution on it, depending on the ether to vaporize it sufficiently for inhalation, was the best mode of administration. Three to six minute intervals are sufficient for its use and a total of from one-half to one ounce of this solution is enough for an operation lasting from thirty minutes to an hour. The effects are a more uniform etherization, the pulse becoming steadier, slower and of better character more rapidly than under ether alone; respirations are quiet and regular, the bronchial secretions are practically checked, and the progress of the operation is not interrupted.

These cases were not selected, and among them were old alcoholics; two women over sixty, one of them nearly eighty years of age. Three were very long tedious operations, lasting over two hours, and in none of the series was any stimulation required during the anesthesia.

Recovery from the anesthetic was uniformly good; there was practically no post-operative shock, and no stimulation was needed in any

one of the cases; only two patients vomited at all and very little nausea was complained of.

From the foregoing facts I concluded that owing to the contraction of the smaller vessels the bronchial glands secrete less mucus, and there is better aeration in the bronchioles and pulmonary vesicles, less ether is required to produce anesthesia and there is less probability of ether pneumonia following. The adrenalin, acting generally from absorption, is a powerful stimulant; it materially lessens shock, lessens the capillary ooze at the field of operation, and is of great benefit to the much weakened patient.—*From the Virginia Medical Semi-Monthly, Feb.* 22, 1907.

STIMULATING THE LIVER.

In an editorial note on this subject in The Western Medical Review for March, 1907, the writer says: "It had been demonstrated experimentally that the only agents which actually increase the secretion of bile are acids, and, to a less extent, salicylic acid. The increase in the flow of bile after administering bile salts by mouth is so much greater than the amount adsorbed that a specified stimulant action on the secretory cells if the liver must be granted."

The presence of the natural sodium salt of the physiologic bile acid (glycocholic acid) in chologestin, combined with the true salicylate of sodium, from oil of wintergreen (which is decidedly less irritant to the stomach than the synthetic salt), accounts for its distinct and positive value as a true cholagogue. In addition to their "liver stimulating" action, these agents contribute to chologestin's efficiency as an intestinal antiseptic, thus rendering it of marked clinical value in the treatment of undue intestinal fermentation and putrefaction, chronic intestinal auto-toxemia, etc. The physiologically standardized pancreation (with sodium bicarbonate to guard it through the acid stomach) assists in the natural conversion of carbohydrates and emulsification of fats and thus renders chologestin especially valuable in all forms of intestinal dyspepsia, especially if attended with biliary stasis, catarrhal conditions of the biliary viae, etc.

A PALATABLE COD-LIVER OIL PREPARATION.

The day for nauseating combinations of drugs has passed, this state being brought about by the ability of chemists to present an efficient yet palatable product. All things being equal, that combination which is pleasing to the taste will meet with much more favor at the hands of physician than another of equal potency but less palatable.

This rule is especially applicable in the case of preparations containing cod-liver oil, a remedial agent that will long continue to be a favorite with physicians. The many pathologic conditions that will respond only to cod-liver oil, showing its great worth, have put chemists on their mettle to prepare combinations in which are incorporated all of the virtues of the oil with the disagreeable features eliminated.

Hagee's cordial of the extract of cod-liver oil compound long ago won the favor of the medical profession and deservedly so too. This cordial possesses marked advantages as a cod-liver oil product and its superiority over ordinary cod-liver oil is due to its palatability. Its administration may be continued over indefinite periods of time. A stomach that would quickly revolt against the pure oil or imperfectly prepared combinations containing it, will accept Hagee's cordial without any evidence of distress.—*The Medical Era.*

IS THE DOCTOR A SHYLOCK?

Edgar Allen Forbes has investigated this subject and claims that a very few physicians of pre-eminence have large incomes, but smaller than men pre-eminnet in other lines.

Something like 20 per cent. of the physicians in the larger cities have handsome incomes, in return for expert work and much of it.

Eighty per cent. of city physicians and most of the country doctors make little more than a decent living—many not even that.

The average of fees charged in city and in country is no larger than it was twenty-five years ago.

The code of medical ethics (established by physicians themselves) is such that no class of the American people need suffer for medical attention because of inability to pay.

Is the doctor a Shylock?—*The World's Work.*